Oregon.

A STATISTICAL
PROFILE
1988

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Introduction

This Statistical Profile contains basic information on key economic variables--Gross State Product, Population, Employment, Personal and Per Capita Income, Consumer Price Index, International Trade, and Projections. The final two chapters provide analysis of two of the state's largest industries, Forest Products and Agriculture.

Following is a brief overview of the Oregon economy. For more detail refer to the appropriate chapter.

Between 1977 and 1986 Oregon's Gross State Product increased at an average rate of only 1.5 percent. The U.S. average growth, 1977-86, was 3.2 percent, with California growing at 3.6 percent a year and Washington growing at 3.0 percent a year.

Figures 1 and 2 show growth in Oregon's total GSP and a break out of GSP by major sectors[1]. Figures 3 through 6 depict GSP growth in manufacturing, forest products (lumber and wood products plus paper products), agriculture (farm plus agricultural services plus food products), and producer services (finance, insurance, real estate, business services, legal services, and miscellaneous services).

Oregon's population growth has been only 0.7 percent per year, 1977-87. The U.S. average growth rate was 1.2 percent over the same time period. Figure 7 shows the growth of Oregon's population.

Oregon's employment increased at an average annual growth rate of 1.8 percent between 1977 and 1986. The U.S. average was 2.2 percent per annum while California's employment grew at a rate of 3.4 percent and Washington's grew at a rate of 3.1 percent per year.

Oregon did not perform as well as other states for several reasons:

1) The decline of forest products employment, through greater mechanization. From the mid to late 1970's Oregon experienced rapid growth. This growth was led by the forest products industry which added labor to increase production. However, this led to prices for lumber that were not competive with Canada and the Southern U.S. As a result the industry has retooled their plants and have obtained wage roll backs in order to compete with other areas.

2) Restructuring within Oregon's largest employer--Tektronix. Part of the change has involved reducing the number of mid-management positions. Large corporations throughout the nation have been trimming mid-management positions.

3) Defense industries are one of the fastest growing sectors in the economy. Oregon has very few defense related firms.

[1]For an explanation of these sectors turn to page 3 of Chapter I.

There are reasons for optimism concerning the Oregon economy over the next decade. The high technology industry is continuing to show strong growth, as are other industries within the manufacturing sector and business services, which includes software firms. Agriculture and forest products will continue to account for a major part of the economy while employment in these industries remains fairly stable. See Chapter VI, Economic Projections for more information.

Figure 8 shows growth in Oregon's total employment. Figures 9 through 12 show employment growth, 1977-86, for manufacturing, forest products, high technology[2], and producer services. The source for these graphs is the Oregon Employment Division's Covered Employment and Payrolls for various years. Forest products includes lumber and wood products and paper products.

Additional information on the Oregon economy is available in the various reports of the **Oregon Economic Trends Project:**

Volume 1	Executive Summary
Volume 2	State and National Trends Report
Volume 3	Oregon Business Growth/Decline Study
Volume 4	Growth Industries Report
Volume 5	Growth Industries Profiles
Volume 6	Growth Industries Survey
Volume 7	Local Development Program Guide

There is a charge for these publications. They may be ordered by contacting Henry Markus at 373-1225.

[2]There is no universally accepted definition for high technology. The definition used is from the U.S. Bureau of Labor Statistics. Industries included are:

Chemicals
Ordnance
Engines & Turbines
Special Industry Machines
Computing & Accounting Machines
Electric & Electronic Equipment except Household Appliances & Electric Wiring
Aircraft & Aircraft Parts
Instruments except Ophthalmic Goods & Watches, Clocks, & Parts

Figure 1
Oregon's Gross State Product, 1977-87

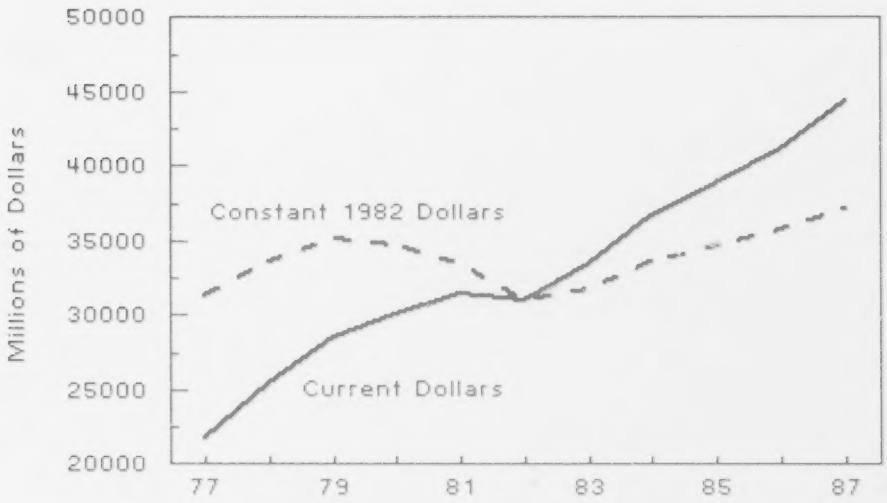
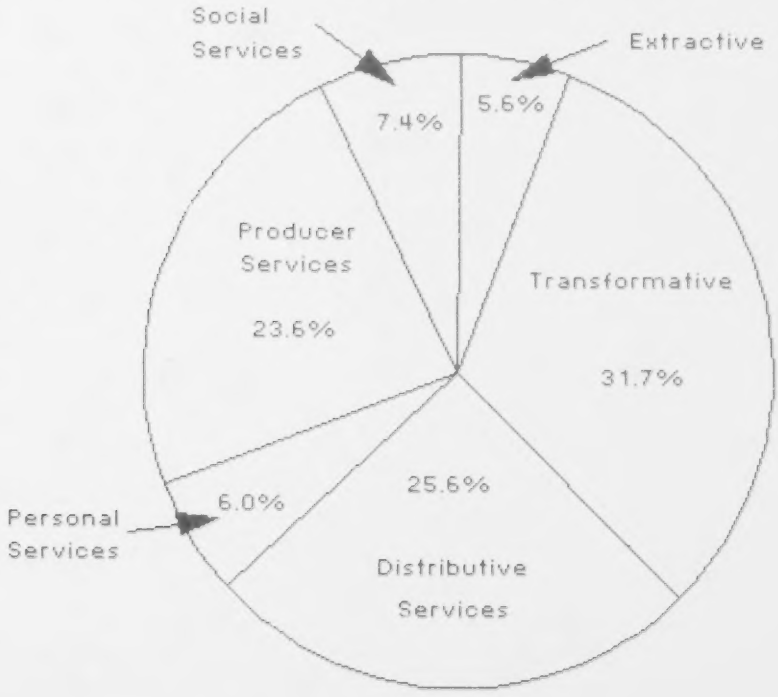


Figure 2
Gross State Product by Major Group



Figures 3 through 6
Oregon Gross State Product for Select Industries

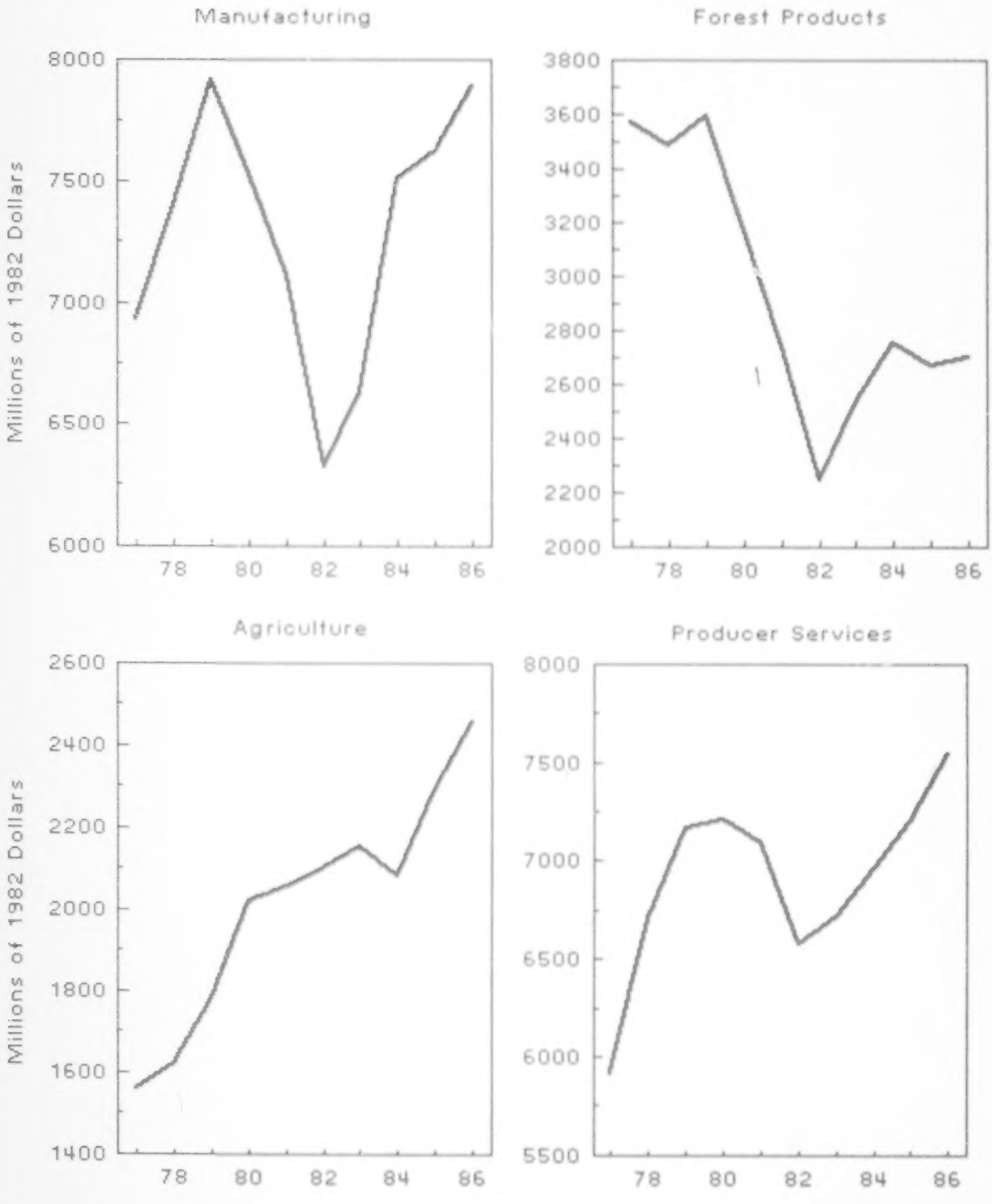


Figure 7
Oregon's Population, 1977-87

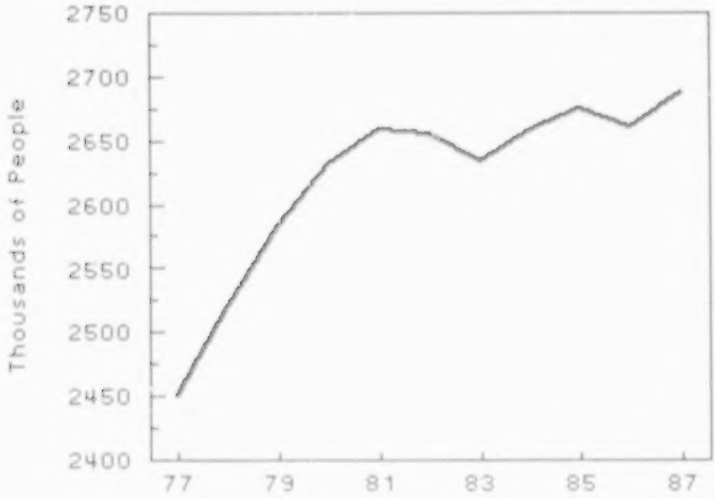
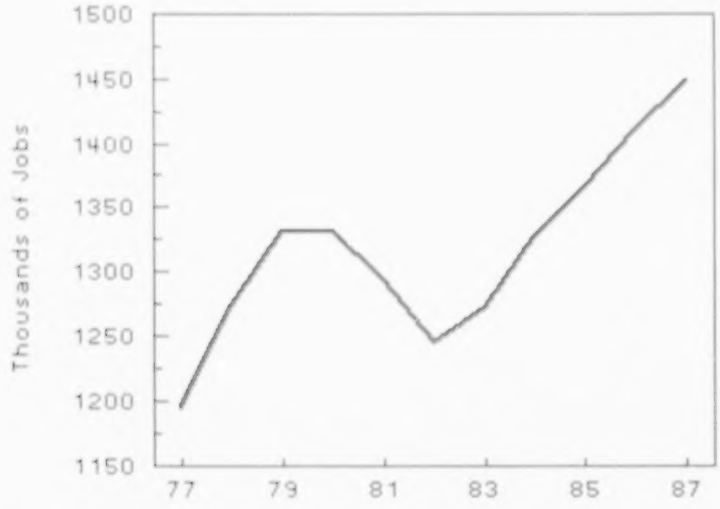
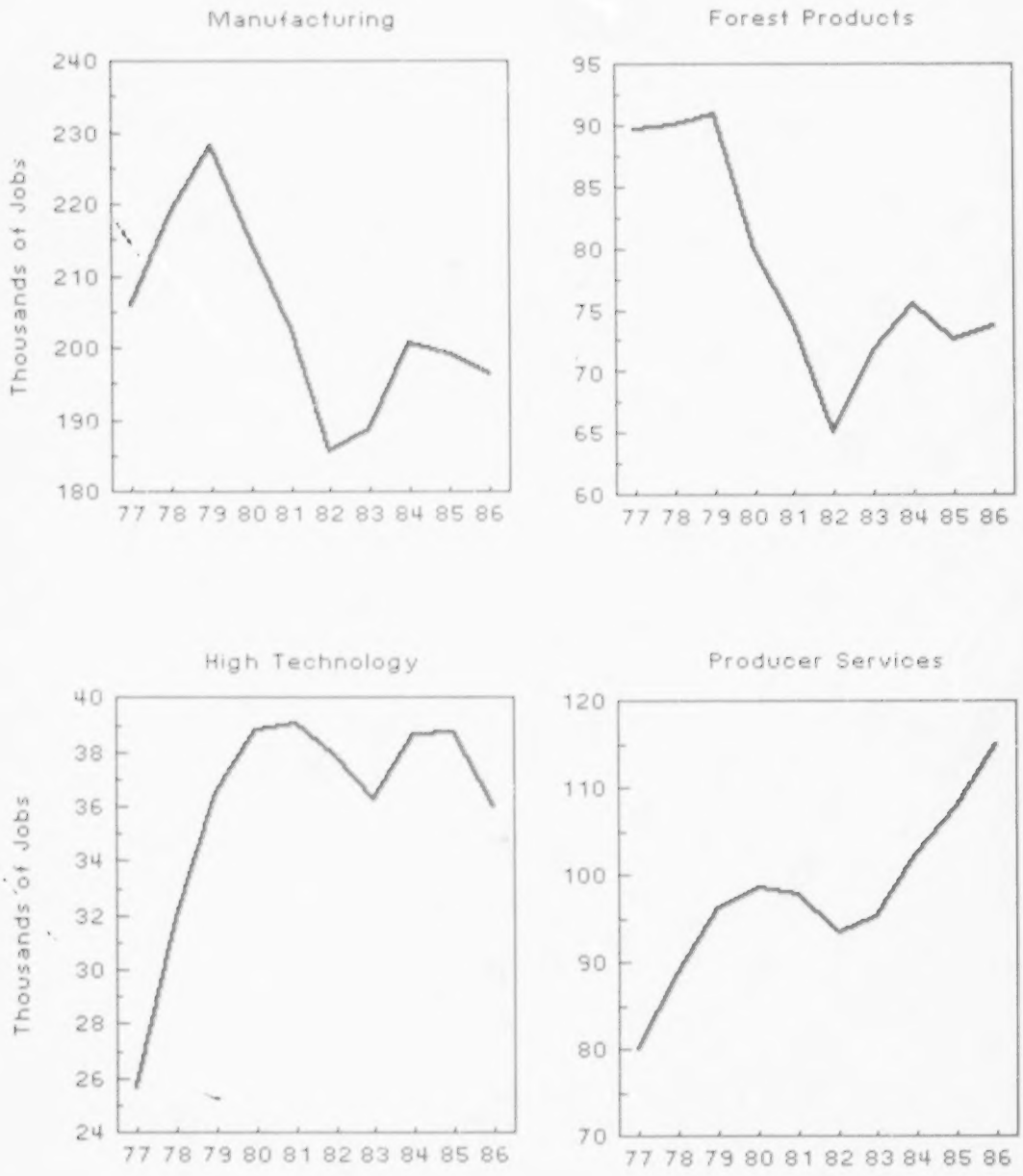


Figure 8
Oregon's Total Employment, 1977-87



Figures 9 through 12
Oregon Employment for Select Industries



Chapter I
Oregon's Gross State Product

Estimates of Gross State Product provide a basic accounting of the state's economy. Gross State Product (GSP) is the value of final output for all goods and services produced in the state. Estimates of GSP by industry describe the composition of the state's economy.

Current dollar estimates reflect transactions that take place at prevailing prices. Thus these estimates combine the effects of changes in output and prices (inflation). To isolate changes in total output alone, the current dollar estimates have been restated in constant 1982 dollars, using the price deflators for GNP by industry.

The Bureau of Economic Analysis, U.S. Department of Commerce, has recently released direct estimates of Gross State Product for all fifty states plus the District of Columbia, 1963-86. Previously, the Oregon Economic Development Department had derived GSP from personal income data. The Policy and Strategic Planning Office of the Oregon Economic Development Department has made preliminary estimates of Oregon's total 1987 GSP relating Oregon personal income to total GSP. The estimates are:

GSP in Current Dollars:	$44,540
GSP in Constant 1982 Dollars:	$37,335

Figure 1 shows Oregon's GSP in both current and constant dollars from 1963 through 1987. The distance between the two lines represents inflation based on 1982 prices.

In analyzing GSP over time, caution is necessary in choosing the starting and ending periods. In order not to bias a comparison, the economy at the starting and ending years should be at similar phases in the business cycle. Figure 2 is the percent change in GSP and GNP. A business cycle begins in the bottom of a recession (or top of a boom), and continues through to the bottom of the next recession (or top of the next boom). On the graph, a business cycle can be seen from 1975 through 1982. 1975 was the bottom of a recession. The economy grew at increasing rates through 1977, then at decreasing rates until 1980, when total output began growing at negative rates, bottoming out in 1982.

It is important to avoid choosing a starting year at the bottom of a recession or an ending year at the top of a business cycle and vice versa. such comparisons distort economic trends. For Table 1, the years 1977 and 1986 have been chosen for comparison.

Throughout the remainder of this publication, the presentation of data will for 1978 through 1987 where possible. If 1987 data is not available for a particular data series, the comparison will be from 1977 through 1986.

The growth rate for 1977-86 is computed as a compound interest rate. Since growth in the economy is being measured, rather than the cost of borrowing money, the rate is called a growth rate rather than an interest rate. These growth rates are annual average rates of increase.

Figure I-1
Oregon's Gross State Product, 1963-87

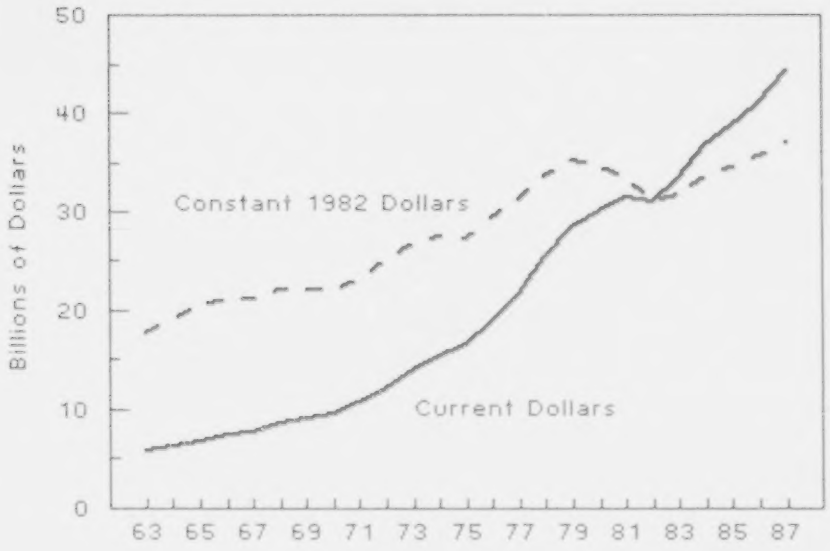
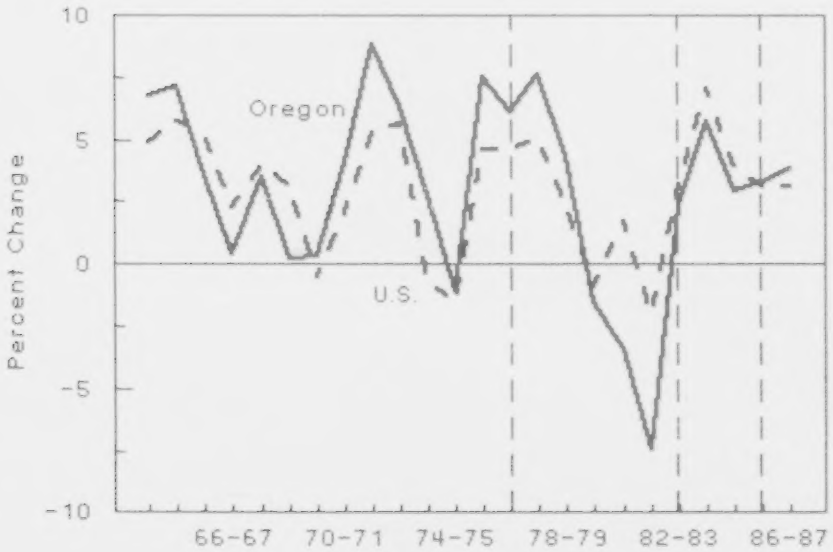


Figure I-2
Percent Change in Real GNP & GSP



Throughout this publication, aggregation of industries by major group will be by six broad categories. This aggregation method is more descriptive of the economy than the more familiar distinction between manufacturing and nonmanufacturing.

Extractive	Farm, Agricultural Services, Fisheries, Forestry, and Mining
Transformative	Construction, Utilities, and Manufacturing
Distributive	Transportation, Communications, Wholesale Trade, and Retail Trade except restaurants
Personal Services	Restaurants, Hotels, Personal Services, Private Households, Auto Repair, Miscellaneous Repair, Amusement and Recreation, and Motion Pictures
Producer Services	Finance, Insurance, Real Estate, Business Services, Legal Services, and Miscellaneous Services
Social Services	Health Services, Educational Services, Social Services, Membership Organizations, and Museums, Zoos, and etc.

This aggregation method was adopted from Castells, Manuel, "Towards the Informational City? High Technology, Economic Change, and Spatial Structure: Exploring Some Hypotheses", Institute of Urban and Regional Development Working Paper No. 430, University of California at Berkeley, August, 1984.

Figure 3 on the following page shows the composition of the Oregon economy by major sector. Figure 4 presents the growth of GSP for Idaho, Oregon, and Washington, 1977-86.

Table I-1 depicts Oregon's GSP by industry. A more detailed breakout is provided in Appendix Tables I-1 and I-2. Table I-2 on page 6 shows total GSP in constant 1982 dollars for fifty states and the District of Columbia. Notice that the 1977-86 growth rate for Oregon (1.5% per annum) is the lowest of all the Far West region. Expanding this comparison to the Rocky Mountain region, only Montana (1.2%) and Wyoming (1.2%) had slower growth rates than Oregon. Appendix Tables I-3 and I-4 provide more detailed information.

Figure I-3
Gross State Product by Major Group

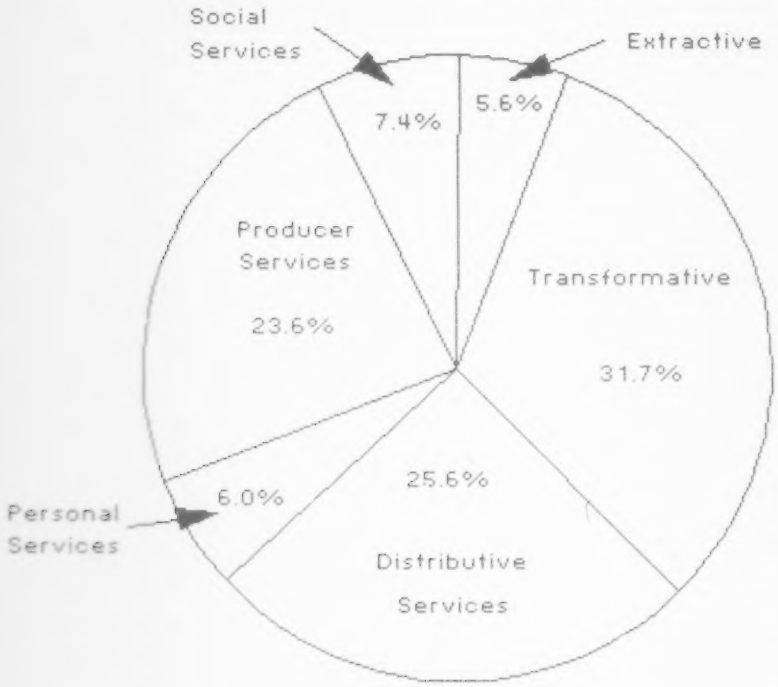


Figure I-4
Pacific Northwest GSP Compared

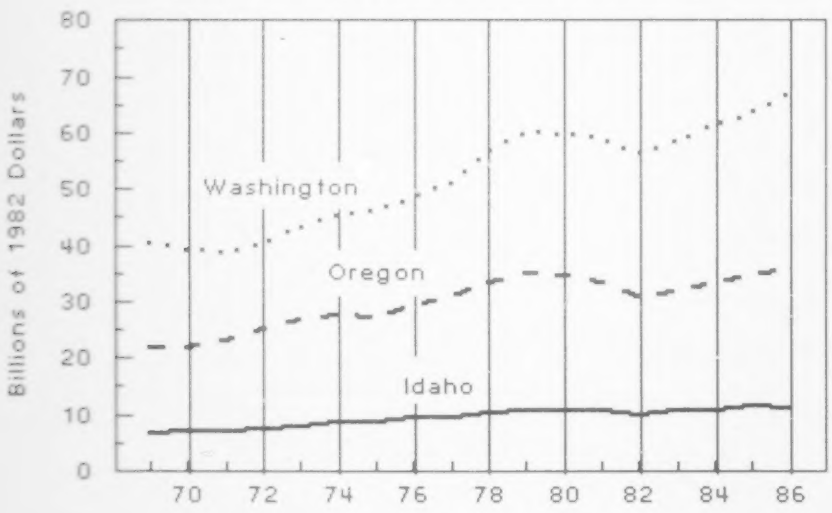


Table I-1
Oregon's Gross State Product by Industry for Select Years
In Millions of 1982 Constant Dollars

	1977	1985	1986	1977-86 GROWTH RATE	1985-86 GROWTH RATE
Total	31,397	34,769	35,934	1.5%	3.4%
Extractive	1,110	1,624	1,801	5.5%	10.9%
Farm	829	1,247	1,392	5.9%	11.6%
Agricultural Services	191	318	353	7.1%	11.0%
Mining	90	59	57	-4.9%	-3.4%
Transformative	10,122	9,870	10,130	0.0%	2.6%
Construction	2,098	1,123	1,152	-6.4%	2.6%
Utilities	1,083	1,117	1,085	0.0%	-2.9%
Manufacturing	6,941	7,630	7,893	1.4%	3.4%
Durable Goods	5,211	5,790	6,041	1.7%	4.3%
Lumber & Wood Prod	2,929	2,147	2,173	-3.3%	1.2%
Nondurable Goods	1,729	1,840	1,851	0.8%	0.6%
Food Products	543	734	715	3.1%	-2.6%
Distributive	6,918	7,874	8,176	1.9%	3.8%
Transportation	1,444	1,459	1,503	0.4%	3.0%
Communication	645	882	897	3.7%	1.7%
Wholesale Trade	2,260	2,931	3,081	3.5%	5.1%
Retail exc Restaurants	2,569	2,602	2,695	0.5%	3.6%
Personal Services	1,774	1,841	1,910	0.8%	3.7%
Restaurants	671	721	780	1.7%	8.2%
Hotels	266	173	169	-4.9%	-2.3%
Personal Services	260	261	268	0.3%	2.7%
Producer Services	5,922	7,209	7,545	2.7%	4.7%
Finance	580	602	616	0.7%	2.3%
Insurance	451	495	547	2.2%	10.5%
Real Estate	3,726	4,517	4,709	2.6%	4.3%
Business Services	524	874	934	6.6%	6.9%
Legal Services	229	320	326	4.0%	1.9%
Misc Professional Srvcs	412	401	413	0.0%	3.0%
Social Services	1,768	2,284	2,375	3.3%	4.0%
Health Services	1,343	1,766	1,842	3.6%	4.3%
Educational Services	110	146	147	3.3%	0.7%
Social Srvs & Mem Orgs	315	372	386	2.3%	3.8%
Government	3,787	4,070	3,996	0.6%	-1.8%
Federal Civilian	799	882	877	1.0%	-0.6%
Federal Military	119	120	135	1.4%	12.5%
State & Local	2,868	3,068	2,984	0.4%	-2.7%

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Table I-2
Total Gross State Product, by State
In Millions of 1982 Dollars

	1977	1985	1986	1977-86 GROWTH RATE	1985-86 GROWTH RATE
United States	2,913,337	3,568,628	3,681,144	2.6%	3.2%
New England	149,470	204,453	217,026	4.2%	6.1%
Connecticut	42,976	58,263	61,750	4.1%	6.0%
Maine	10,916	14,238	15,056	3.6%	5.7%
Massachusetts	71,258	96,698	102,279	4.1%	5.8%
New Hampshire	9,084	15,541	17,073	7.3%	9.9%
Rhode Island	10,323	12,572	13,283	2.8%	5.7%
Vermont	4,913	7,142	7,585	4.9%	6.2%
Mideast	573,541	673,663	702,765	2.3%	4.3%
Delaware	8,313	9,699	10,072	2.2%	3.8%
District of Columbia	22,168	23,135	23,682	0.7%	2.4%
Maryland	50,507	62,179	65,408	2.9%	5.2%
New Jersey	97,370	126,460	133,468	3.6%	5.5%
New York	251,092	296,381	309,273	2.3%	4.3%
Pennsylvania	144,091	155,809	160,862	1.2%	3.2%
Great Lakes	564,258	603,461	622,918	1.1%	3.2%
Illinois	168,627	178,493	183,849	1.0%	3.0%
Indiana	68,832	73,392	75,924	1.1%	3.4%
Michigan	129,279	131,417	136,433	0.6%	3.8%
Ohio	140,466	152,689	156,541	1.2%	2.5%
Wisconsin	57,055	67,469	70,171	2.3%	4.0%
Plains	215,445	253,800	261,193	2.2%	2.9%
Iowa	37,277	39,344	40,425	0.9%	2.7%
Kansas	31,032	36,560	37,783	2.2%	3.3%
Minnesota	51,661	65,463	68,117	3.1%	4.1%
Missouri	60,424	70,830	72,629	2.1%	2.5%
Nebraska	19,563	23,300	23,673	2.1%	1.6%
North Dakota	8,077	9,884	9,806	2.2%	-0.8%
South Dakota	7,411	8,418	8,760	1.9%	4.1%
Southeast	568,140	737,914	762,321	3.3%	3.3%
Alabama	37,463	46,849	48,409	2.9%	3.3%
Arkansas	21,410	27,159	28,168	3.1%	3.7%
Florida	95,449	145,171	152,269	5.3%	4.9%
Georgia	58,085	83,461	88,827	4.8%	6.4%
Kentucky	41,137	46,753	47,502	1.6%	1.6%
Louisiana	68,209	73,777	68,508	0.0%	-7.1%
Mississippi	23,628	27,778	27,987	1.9%	0.8%
No Carolina	62,681	83,170	87,371	3.8%	5.1%
So Carolina	27,791	37,687	39,281	3.9%	4.2%
Tennessee	47,941	61,337	64,124	3.3%	4.5%
Virginia	63,151	83,143	88,171	3.8%	6.0%
West Virginia	21,193	21,629	21,705	0.3%	0.4%

Table I-2, Continued

	1977	1985	1986	1977-86 GROWTH RATE	1985-86 GROWTH RATE
Southwest	303,010	395,657	389,454	2.8%	-1.6%
Arizona	28,110	43,350	46,058	5.6%	6.2%
New Mexico	16,932	21,741	21,154	2.5%	-2.7%
Oklahoma	39,235	47,178	45,928	1.8%	-2.6%
Texas	218,733	283,388	276,313	2.6%	-2.5%
Rocky Mountain	82,174	105,899	106,279	2.9%	0.4%
Colorado	37,429	50,820	51,781	3.7%	1.9%
Idaho	9,967	11,815	11,672	1.8%	-1.2%
Montana	9,675	10,323	10,763	1.2%	4.3%
Utah	15,324	20,920	21,193	3.7%	1.3%
Wyoming	9,779	12,022	10,870	1.2%	-9.6%
Far West	431,622	557,990	583,734	3.4%	4.6%
California	338,040	444,082	464,550	3.6%	4.6%
Nevada	10,673	15,474	16,092	4.7%	4.0%
Oregon	31,397	34,769	35,934	1.5%	3.4%
Washington	51,511	63,664	67,158	3.0%	5.5%
Alaska	12,221	20,281	19,325	5.2%	-4.7%
Hawaii	13,455	15,510	16,130	2.0%	4.0%

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Chapter II
Oregon's Population

Between 1978 and 1987 the growth in Oregon's population has been only 0.7 percent, with significant out-migration due to a lack of jobs during the early 1980's. The U.S. average, 1978-87, was 1.2 percent.

Note in Table II-1 that from 1981 to 1982, net out-migration was 25,263 people. Net out-migration increased to 39,926 in the following year, 1982-83. Then between 1985 and 1986 more people again left the state than moved into the state, resulting in a net out-migration of 30,507 people. Figure II-3 shows this graphically.

Table II-1
Oregon's Population 1977-87

Year	Population	Change in Population	Natural Increase	Net Migration
1977	2,451,900	65,200	16,300	48,900
1978	2,521,900	70,000	17,100	52,900
1979	2,584,300	62,400	19,800	42,600
1980	2,633,156	48,856	15,000	33,856
1981	2,660,735	27,579	27,161	418
1982	2,656,185	(4,550)	20,713	(25,263)
1983	2,635,000	(21,185)	18,741	(39,926)
1984	2,660,000	25,000	17,724	7,276
1985	2,675,800	15,800	15,694	106
1986	2,661,500	(14,300)	16,207	(30,507)
1987	2,690,000	28,500	13,708	14,792

Source: Oregon Center for Population Research and Census.

Figure II-4 shows that the distribution of Oregon's population by sex is fairly even in each age category with the exception of the 70-and-over age group.

Figure II-5 compares the population density of several select states. Oregon ranks 39th in the nation, with 27 people per square mile. New Jersey has the most people per square mile, 986. Alaska is the least dense, with only one person per square mile.

See appendix Table II-1 for the numbers behind Figure II-4 and appendix Table II-2 for Figure II-5.

Figure II-1
Oregon's Population, 1977-87

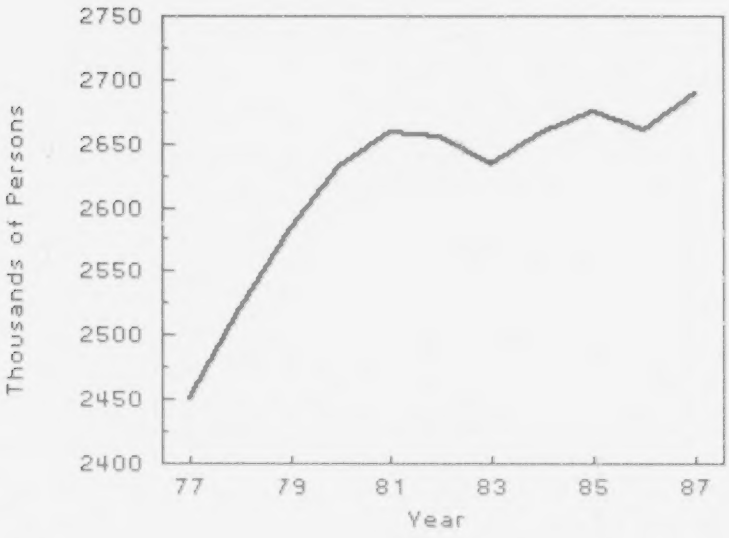


Figure II-2
Change in Oregon's Population

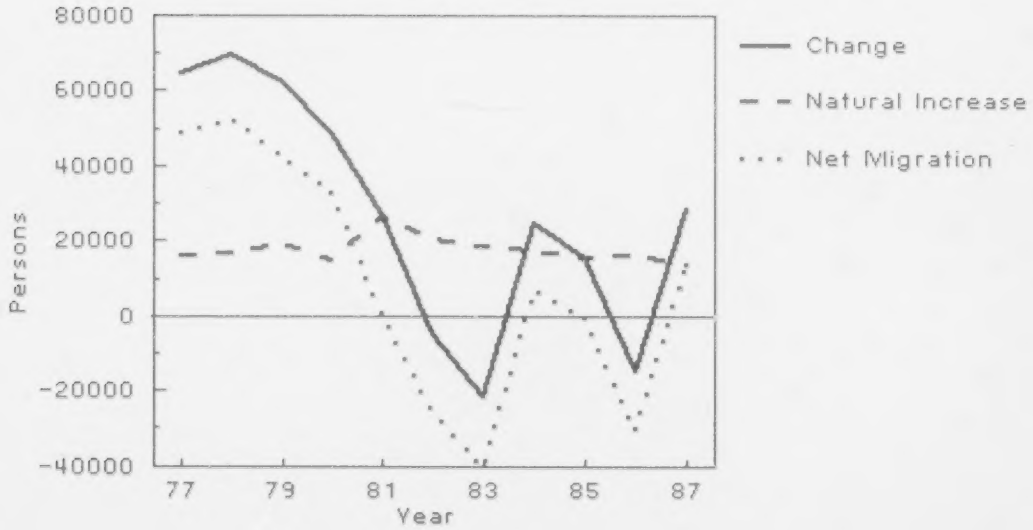


Figure II-3
Oregon's 1987 Population by Age and Sex

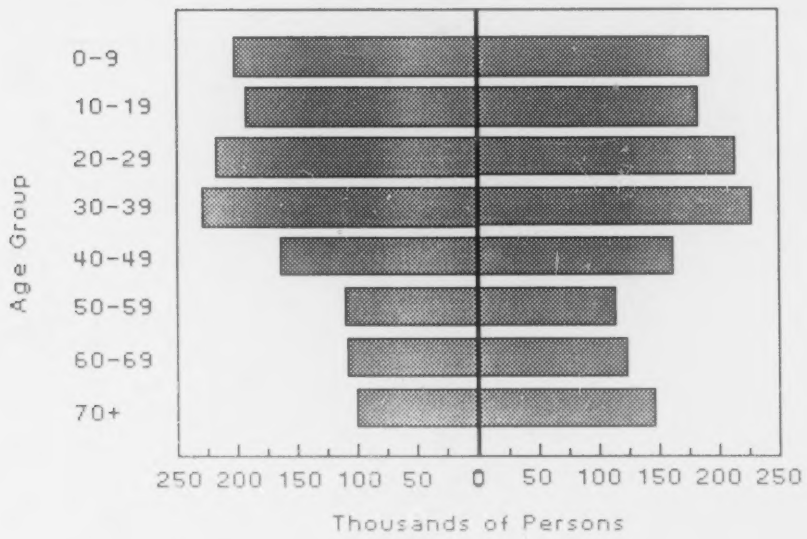
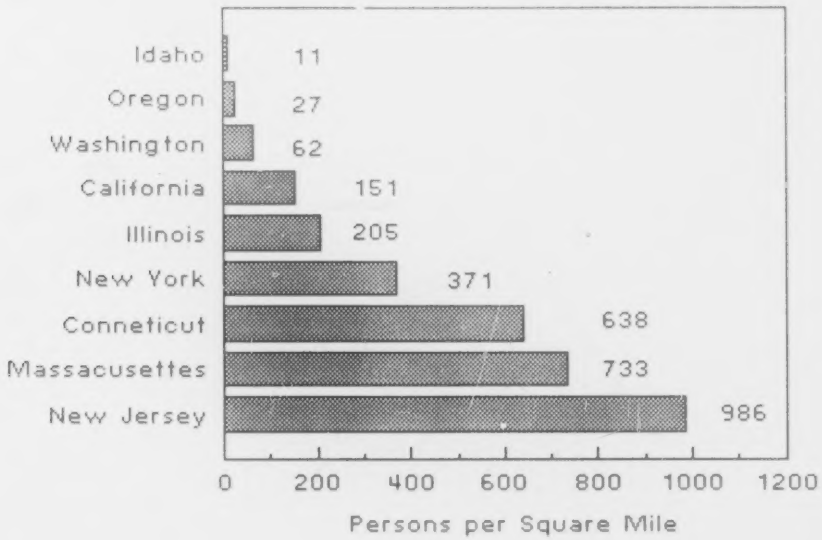


Figure II-4
Population Density for Select States, 1980



Chapter III
Oregon's Employment

Oregon's total employment increased by 174,143 between 1978 and 1987. Between 1980 and 1982, Oregon lost 85,623 jobs. Since 1982, Oregon has regained those jobs plus 117,231 additional jobs. This is illustrated in Figure III-1.

Figure III-2 shows the growth in the number of proprietors. Between 1978 and 1987 the number of proprietors increased by 97,592. As much as 25 percent of this increase has been a result of large forest products companies divesting themselves of their logging operations. Many of these laid-off workers start their own logging business and continue falling timber for the same company. However, now they are nonunion and responsible for their own taxes including Workers' Compensation taxes, which are extremely high in this hazardous occupation.

Table III-1 shows Oregon's employment by major sector for 1978, 1986 and 1987. The fastest-growing sectors have been personal, producer, and social services. Appendix Table III-1 provides a detailed breakdown of employment by industry, 1978 through 1987. Figure III-3 shows the change in employment by sector for 1978 and 1987. Figure III-4 shows the distribution of Oregon's 1987 private sector employment.

Table III-1
Oregon Employment Growth, 1978-87

	1978	1986	1987p	Growth Rate 1977-87	Percent Change 1986-87
Total Employment	1,275,925	1,411,358	1,450,068	1.4%	2.7%
Wage & Salary	1,078,517	1,120,758	1,155,068	0.8%	3.1%
Proprietors	197,408	290,600	295,000	4.6%	1.5%
Farm	31,946	38,503	38,490	2.1%	-0.0%
Nonfarm	165,462	252,097	256,510	5.0%	1.8%
Nonfarm	1,215,011	1,350,872	1,389,568	1.5%	2.9%
Private Nonfarm	1,007,489	1,139,366	1,173,519	1.7%	3.0%
Government	207,522	211,506	216,049	0.4%	2.1%
Private Employment by Major Sector:					
Extractive	81,074	86,974	87,155	0.8%	0.2%
Transformative	305,480	280,015	287,365	-0.7%	2.6%
Distributive Services	271,628	277,429	287,000	0.6%	3.4%
Personal Services	153,055	184,512	195,000	2.7%	5.7%
Producer Services	152,351	218,825	230,000	4.7%	5.1%
Social Services	104,815	138,919	147,500	3.9%	6.2%

p=preliminary
Source: Bureau of Economic Analysis, U.S. Department of Commerce. 1987 preliminary is an estimate of the Oregon Economic Development Department.

Figure III-1
Oregon's Total Employment, 1977-87

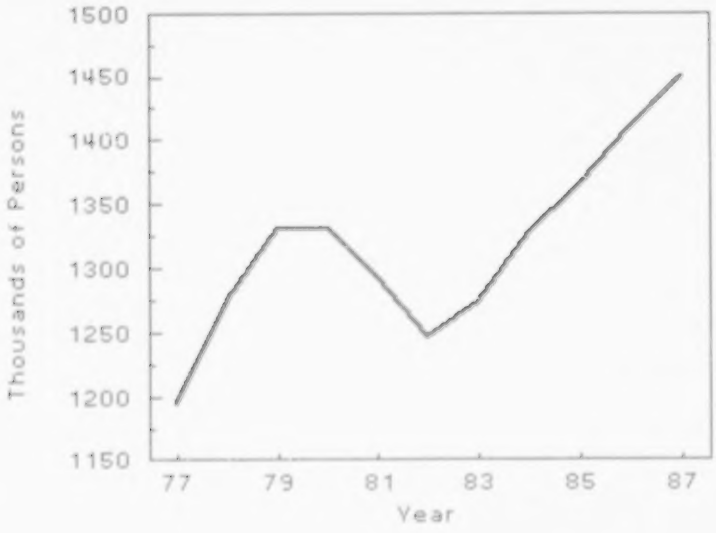


Figure III-2
Number of Oregon Proprietors, 1977-87

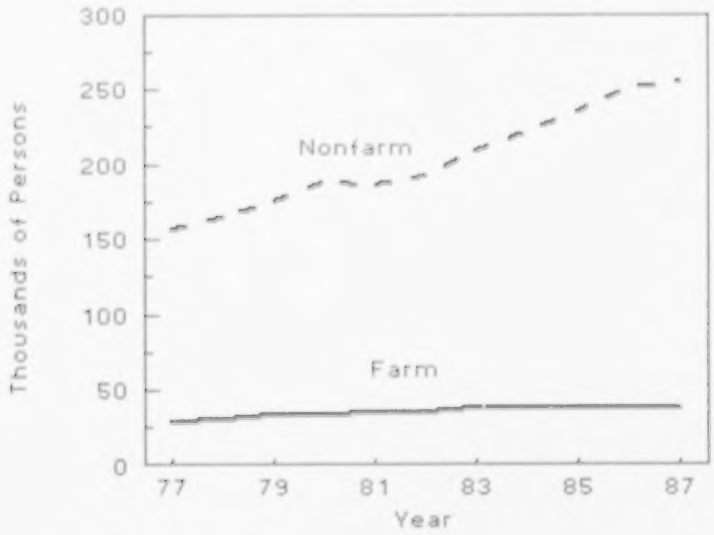


Figure III-3
Oregon Employment by Major Sector

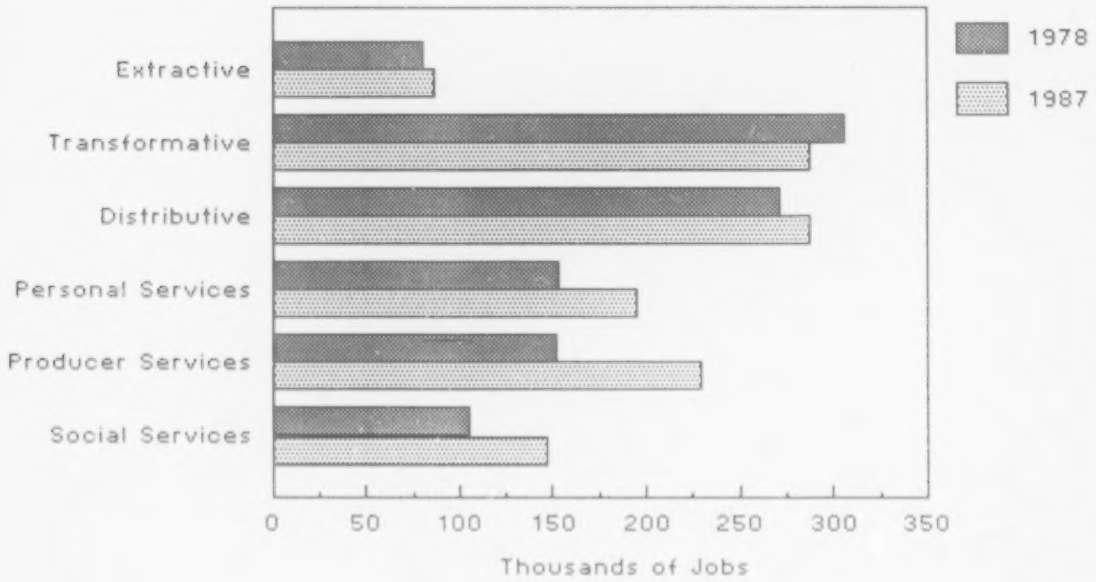
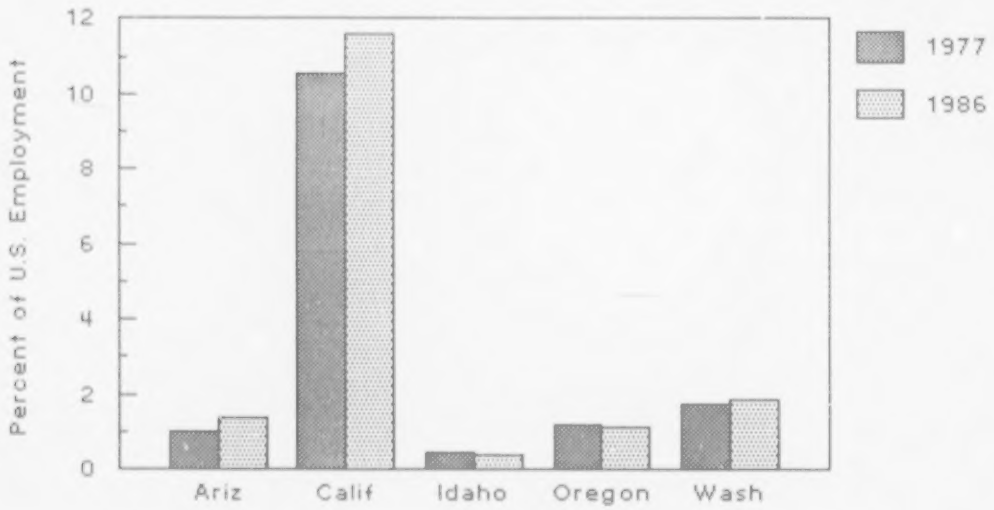


Figure III-4
Shares of Total Employment for Select States



Comparison of Employment Growth between States

Figure III-4 shows the share of total national employment for several states during 1977 and 1986. Oregon's share has remained nearly the same, while Washington's has increased slightly and California's share of total U.S. employment has increased significantly.

Why has Oregon not been doing as well as other states? In an attempt to answer this question, the change in employment for 1977-86, was isolated into three categories:

1) National Change--what the state's change in employment would be if it changed at the national average.

2) Industrial Mix--how much of the actual change in employment is due to the types of industries that are present in the state. If a state has a higher than average proportion of high-growth industries (such as Business Services), this number would be positive. If a state has a high proportion of slow-growth industries (such as agriculture), this number will be negative.

3) State Share--this is simply a catchall for the change in employment in a state that is unexplained by either of the above.

Table III-2 on page 16 shows the change in employment and attempts to attribute that change to a cause for several states. Oregon's national share is greater than the actual change in employment. Had Oregon's employment increased at the national average, the state would have 53,280 more jobs. The state's industrial mix factor shows that 5,827 of the net new jobs between 1976 and 1986 are the result of Oregon having proportionately more fast-growing industries than the national average. However, the state share factor shows a negative 59,108 jobs. An examination of changes in employment by industry may help explain why Oregon's employment has not expanded as rapidly as other states'.

State Employment Performance Compared with the National Average

Table III-3 compares state employment growth by industry. The second column of the table provides the 1977-86 percent change in employment by industry for the U.S. The other numbers in the table are indexed to the national average growth in each industry for selected states to compare state employment growth with the national average. An index of 1.00 indicates that a state's employment in that particular industry matched the national growth rate. Therefore, a number greater than one indicates the percent increase in the state's employment in this industry was greater than the national average.

Out of the eleven national industries that increased by 40 percent or more, Oregon's employment increased at or above the national average in five (an index of .99 is considered to be at the national average).

Washington performed at or above the national average in nine of these eleven industries. California is at or above the national average in all eleven industries. Oregon showed significantly higher than national growth in Educational Services, Electric and Electronic Machinery, and Rubber and Miscellaneous Plastics industries.

In the nation's fastest growing industries, however, Oregon did not gain employment as rapidly as Arizona, California, or Washington. The reasons that Oregon did not perform as well include:

1) The decline of forest products employment, through greater mechanization. From the mid to late 1970's Oregon experienced rapid growth. This growth was led by the forest products industry which added labor to increase production. However, this led to prices for lumber that were not competive with Canada and the Southern U.S. As a result the industry has retooled their plants and have obtained wage roll backs in order to compete with other areas.

2) Restructuring within Oregon's largest employer--Tektronix. Part of the change has involved reducing the number of mid-management positions. Large corporations throughout the nation have been trimming mid-management positions.

3) Defense industries are one of the fastest growing sectors in the economy. Oregon has very few defense related firms.

There is cause to expect strong growth in the Oregon economy within the next ten years. The high technology industries, apart from Tektronix, are continuing to show strong growth, the state's plastics industry and business services, which includes software firms, have been increasing in number and size at strong rates. As forest products and Tektronix stabilize their employment levels, the growth in total employment will be at rates greater than the national average. See Chapter VI, Economic Projections.

Table III-2
Comparison of Employment Growth, 1977-86 for Select States

	Arizona	California	Idaho	Mass
Change in Employment	664,053	3,760,644	44,803	761,690
National	227,494	2,401,004	94,715	618,983
Industry Mix	40,862	432,187	(4,301)	86,202
State Share	395,697	927,452	(45,611)	56,505

	New York	No Carolina	Oregon	Washington
Change in Employment	1,373,799	648,189	211,170	561,588
National	1,777,615	622,029	264,450	395,113
Industry Mix	346,057	(207,380)	5,827	33,894
State Share	(749,873)	233,541	(59,108)	132,501

Table III-3
Comparison of State Growth with National Growth by Industry 1977-86

Industry/State	Percent Change	Ariz	Calif	Idaho	Oregon	Wash
Business Services	125.6%	1.40	1.02	0.75	1.02	0.96
Legal Services	75.5%	1.18	1.15	0.93	1.03	1.21
Museums, Zoos, etc	64.3%	0.76	1.17	0.00	0.91	1.32
Social Services	61.3%	0.99	1.12	1.16	0.99	1.32
Personal Services	58.9%	1.21	1.06	1.08	1.02	1.14
Misc Services	58.1%	1.37	1.07	0.74	0.84	0.99
Auto Repair	58.1%	1.47	1.00	1.04	0.97	1.01
Agric Services	56.9%	1.11	1.02	1.02	1.01	1.06
Finance, Insurance, & Real Estate	49.8%	1.47	1.08	0.97	0.90	1.06
Health Services	45.7%	1.31	0.99	0.96	0.96	1.05
Lodging Places	42.0%	1.22	1.06	0.84	0.80	0.93
Amusement & Rec	37.3%	1.32	1.13	1.06	1.12	1.18
Motion Pictures	36.6%	1.18	1.16	0.86	1.13	1.27
Educational Services	35.3%	1.38	1.11	1.08	1.39	1.31
Construction	30.6%	1.66	1.17	0.69	0.75	0.94
Printing	27.2%	1.35	1.09	1.19	1.00	1.10
Retail Trade	26.4%	1.27	1.07	0.88	0.95	1.07
Utilities	24.9%	0.98	1.06	0.93	0.96	1.10
Transportation Equip	22.9%	1.69	1.11	0.34	0.81	1.22
Misc Repair Services	19.4%	1.35	1.10	1.06	1.06	1.02
Wholesale Trade	19.3%	1.34	1.12	0.82	0.97	1.00
Mining	18.3%	0.50	1.21	0.83	1.04	1.38
Transportation	15.0%	1.44	0.89	1.04	0.92	0.85
Instruments	13.9%	2.10	1.36	5.13	0.82	3.26
Electric & Electronic	13.3%	1.54	1.37	2.28	2.48	1.58

Table III-3, Continued
Comparison of State Growth with National Growth by Industry
1977-86

Industry/State	Percent Change	Ariz	Calif	Idaho	Oregon	Wash
Communication	12.2%	1.26	1.02	0.80	0.90	1.11
Rubber & Misc Plastic	10.5%	1.78	1.04	1.26	**1.44**	1.59
Furniture & Fixtures	10.1%	2.27	1.12	0.78	0.95	1.34
Membership Orgs	-0.4%	1.34	1.07	1.02	1.04	0.96
Lumber & Wood Prod	-0.6%	1.27	0.90	0.78	0.84	0.72
Paper Products	-2.3%	1.64	1.09	1.51	0.90	0.97
Chemical Products	-4.3%	2.35	1.12	1.55	1.09	1.68
Machinery	-5.9%	1.70	1.27	1.52	1.17	1.49
Food Products	-6.0%	1.19	1.00	0.96	1.04	1.05
Stone, Clay, & Glass	-7.6%	1.67	1.13	0.95	1.17	1.19
Motor Vehicles	-8.7%	1.77	0.80	1.80	1.11	1.18
Fabricated Metals	-9.1%	1.87	1.19	1.20	1.01	1.09
Misc Manufacturing	-10.5%	1.48	1.13	0.97	1.67	1.44
Farm	-12.4%	1.03	0.93	1.03	1.16	1.20
Apparel	-14.7%	1.06	1.43	4.28	0.90	1.12
Petroleum & Coal Prod	-16.4%	1.03	1.35	0.00	1.10	1.06
Private Households	-18.1%	1.22	1.18	0.00	0.95	0.99
Textile Mills	-22.1%	10.21	0.00	0.00	0.95	1.63
Primary Metals	-36.4%	1.59	1.18	0.15	1.43	1.28
Leather Products	-42.0%	1.44	1.09	4.67	2.20	1.63

Percent Change is the percent change in national employment 1977-86 by industry.

Source: Computations of the Policy and Strategic Planning Office, Oregon Economic Development Department, from data provided by Bureau of Economic Analysis, U.S. Department of Commerce.

Chapter IV
Oregon's Total and Per Capita Income

Oregon's per capita income has not been keeping up with the national average. Figure IV-1 on page 21 compares the growth of Oregon's real per capita income with the U.S. average. The per capita income figures were deflated to 1982 dollars by the U.S. deflator for personal consumption expenditures.

Table IV-1, below, shows per capita income for select states in 1982 constant dollars. The growth rate is the annual average percent change from 1978 to 1987. Notice that per capita income growth in California and Colorado was at the national average. Arizona exceeded the national average while the rest of the western states lost ground as compared to the national average growth in per capita income.

Figure IV-2 on page 22 compares the annual change in per capita income as a percent of the U.S. average for California, Oregon, and Washington.

Table IV-1
Per Capita Income for Select States
in 1982 Constant Dollars

	1978	1987	Percent of U.S.	Growth Rate 1978-87
U.S.	$11,363	$12,912	100.0%	1.4%
Alaska	16,637	15,056	116.6%	-1.1%
Arizona	10,289	11,810	91.5%	1.5%
California	13,144	14,866	115.1%	1.4%
Colorado	11,756	13,352	103.4%	1.4%
Hawaii	12,095	12,934	100.2%	0.7%
Idaho	10,085	9,949	77.1%	-0.2%
Montana	10,439	10,316	79.9%	-0.1%
Nevada	13,380	13,433	104.0%	0.0%
New Mexico	9,397	9,826	76.1%	0.5%
Oregon	11,587	11,689	90.5%	0.1%
Utah	9,450	9,466	73.3%	0.0%
Washington	12,311	13,000	100.7%	0.6%

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table IV-2 shows Oregon's personal income, per capita income and earnings by industry. The appendix contains a more detailed table.

Table IV-2
Oregon Personal Income by Source for Select Years

	1978	1985	1986	1987
Total Personal Income	20,818,667	34,074,918	35,955,251	37,900,000
Earnings by Place of Work	16,127,100	24,023,883	25,435,323	
Extractive	651,772	938,243	1,100,710	
Farm	416,510	630,754	765,145	
Agricultural Services	171,123	209,020	246,529	
Mining	64,139	98,469	89,036	
Transformative	5,440,624	6,919,610	7,209,458	
Construction	1,274,832	1,221,186	1,323,340	
Utilities	206,947	352,082	370,982	
Manufacturing	3,958,845	5,346,342	5,515,136	
Nondurable Goods	834,101	1,296,008	1,349,610	
Food Products	340,021	479,905	489,529	
Durable Goods	3,124,744	4,050,334	4,165,526	
Lumber & Wood Products	1,624,549	1,782,913	1,802,356	
Distributive	3,676,969	5,038,824	5,248,504	
Transportation	739,729	843,212	861,598	
Communication	277,811	415,911	422,106	
Wholesale Trade	1,148,440	1,702,836	1,783,488	
Retail Trade	1,510,989	2,076,865	2,181,312	
Personal Services	1,035,565	1,559,222	1,673,987	
Restaurants	409,977	575,227	631,440	
Producer Services	1,615,403	2,917,586	3,262,627	
Finance	322,642	646,089	719,671	
Insurance	304,364	486,924	544,060	
Real Estate	245,905	75,647	115,985	
Business Services	316,147	863,942	962,023	
Legal Services	149,846	393,507	431,447	
Misc Services	276,499	451,477	489,441	
Social Services	1,198,649	2,324,805	2,510,957	
Health Services	888,233	1,765,808	1,915,873	
Government	2,508,118	4,070,507	4,161,822	

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Figure IV-1
Growth in Real Per Capita Income

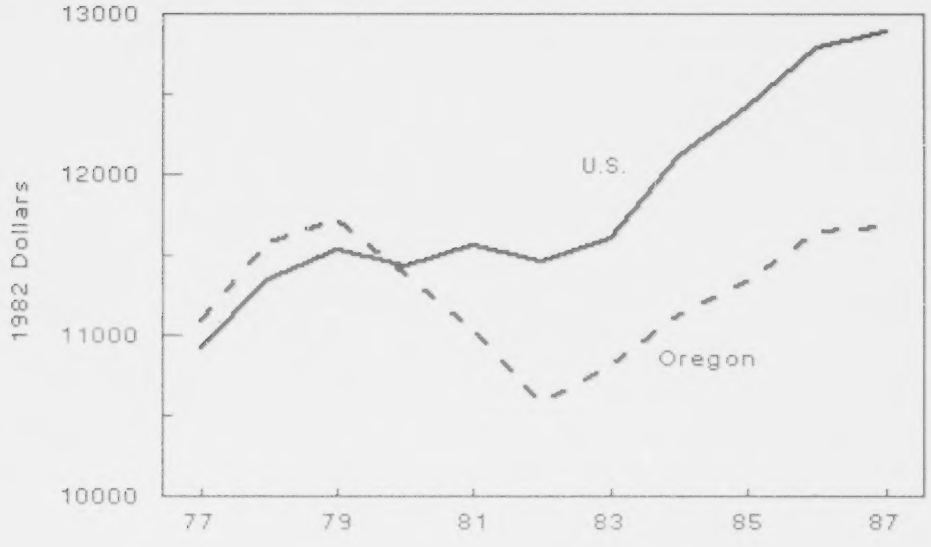
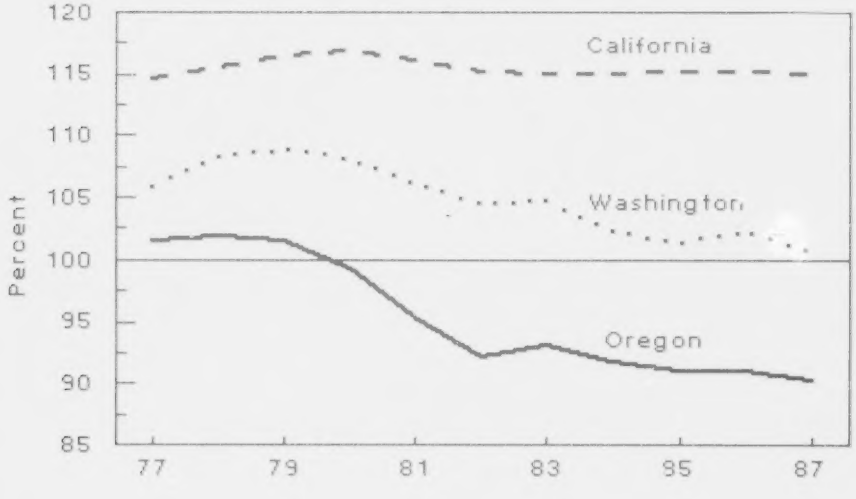


Figure IV-2
Per Capita Income as a Percent of the U.S.



Chapter V
Oregon and International Trade

International trade statistics for Oregon are available only on the basis of shipments passing through the Columbia-Snake River System. These figures, therefore, include shipments from Washington and Idaho ports on these rivers as well as Oregon ports. Furthermore, these figures represent all shipments passing through these ports without regard to the origin of exports or the destination of imports. Most of the imports are destined for other states and many of Oregon's exports are sent out through the Puget Sound Customs District. Data on shipments actually originating in or destined to Oregon do not exist.

Without these figures it is difficult to estimate the importance of international trade to the Oregon economy. Using employment by industry estimates from the Oregon Employment Division and 1984 U.S. Census estimates of Oregon manufactured exports, the Office of Policy and Strategic Planning in the Oregon Economic Development Department estimates that five percent of Oregon's employment is directly involved in international trade. When the multiplier effect of these jobs is estimated, international trade is accountable for 8 to 9 percent of all Oregon jobs.

Table V-1
International Trade through
the Columbia-Snake River Custom District
In Millions of Dollars

	Imports		Exports		Total Trade	
	Current	82 Dollars	Current	82 Dollars	Current	82 Dollars
1981	$3,012.2	$2,964.8	$3,897.6	$3,997.5	$6,909.8	$6,962.3
1982	2,810.1	2,810.1	3,314.1	3,314.0	6,124.2	6,124.1
1983	3,022.6	3,103.3	3,699.0	3,651.4	6,754.8	6,754.7
1984	3,849.0	3,964.0	4,119.9	3,992.1	7,968.9	7,956.1
1985	4,074.0	4,297.4	3,462.2	3,417.8	7,536.2	7,715.2
1986	4,916.8	5,338.5	3,110.7	3,120.1	8,027.5	8,458.6
1987	4,851.0	4,975.4	3,624.0	3,606.0	8,475.1	8,581.4

Source: Oregon International Trade Institute.

Table V-1 shows total imports and exports 1981 through 1987 in current and in 1982 constant dollars. Imports declined 1 3 percent while exports increased by 16.5 percent between 1986 and 1987. Figure V-1 provides a graphic look at total imports and exports over time.

Figures V-2 through V-5 show the change in exports and imports, by products and by countries. The products and countries have been ranked by their 1987 levels.

Appendix Tables V-1 through V-4 provide a more detailed list of countries and products involved in trade through the Columbia-Snake Customs District. They show 1986 and 1987 trade values and the percent change. For more detailed data, contact the International Trade Institute at Portland State University and request a copy of Oregon Trade Flow Tables, 1981-1987.

Figure V-1
Imports and Exports through the Columbia-Snake River Customs District

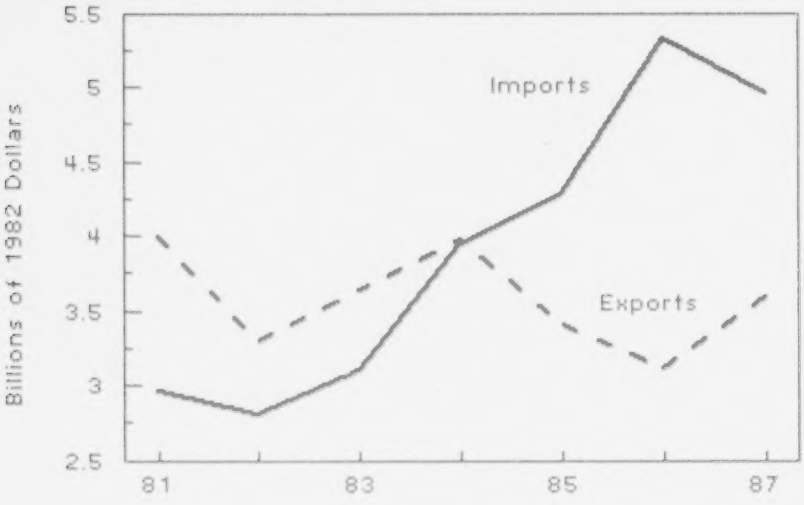


Figure V-2
Top Export Products

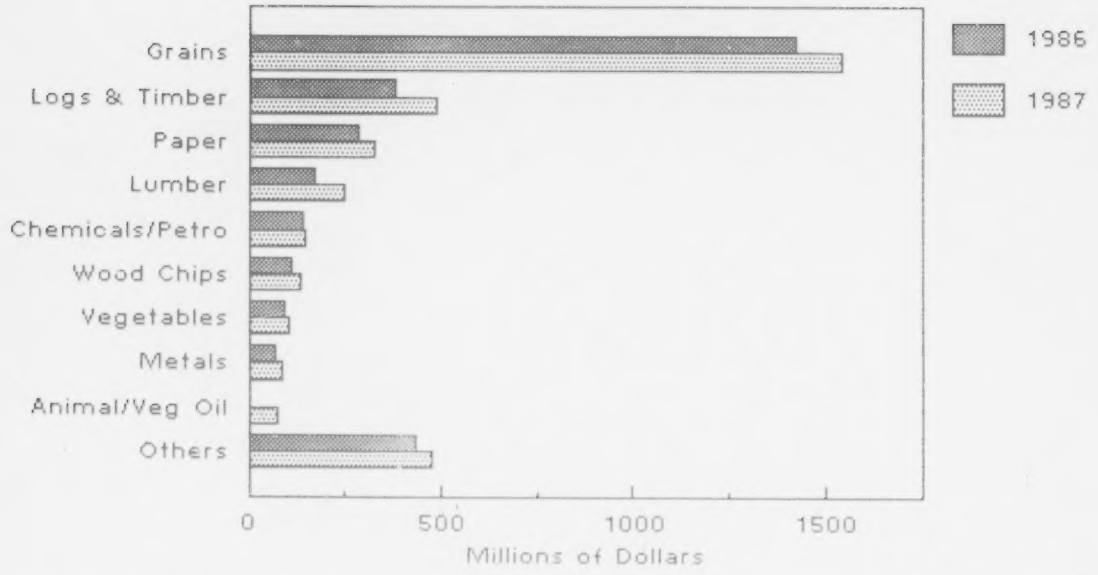


Figure V-3
Top Import Products

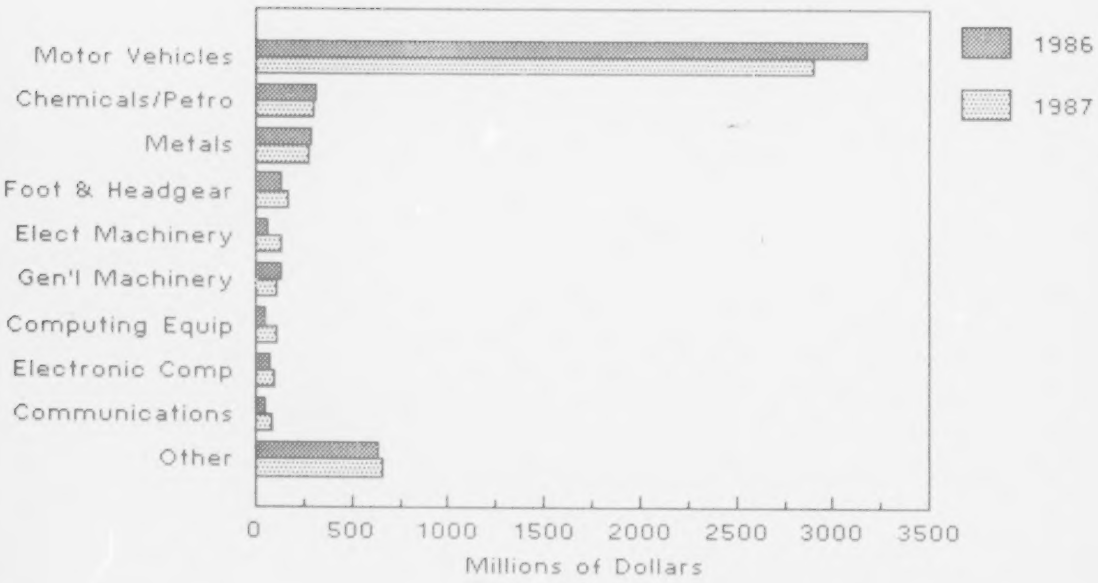


Figure V-4
Top Export Countries

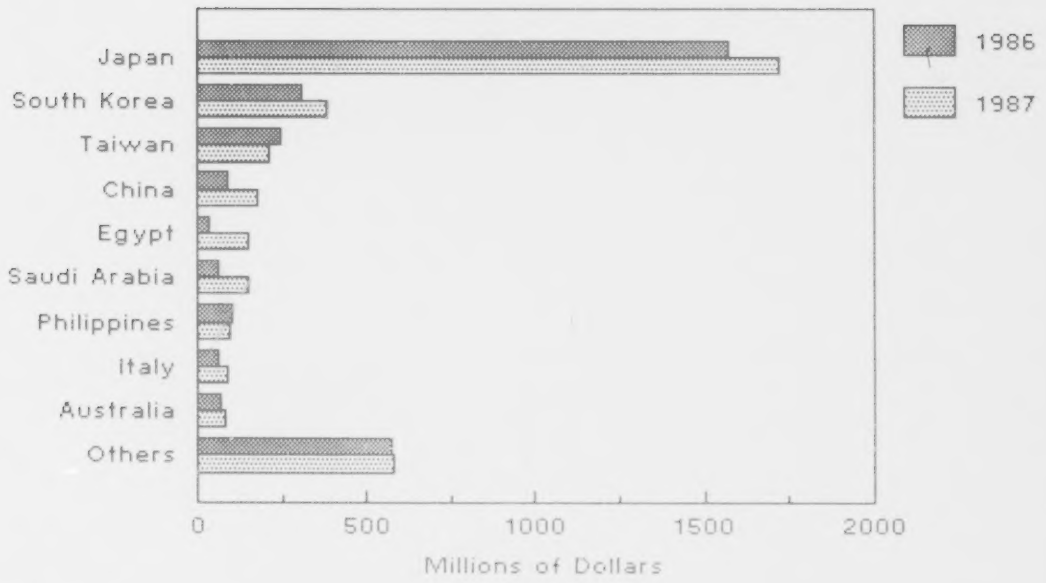


Figure V-5
Top Import Countries

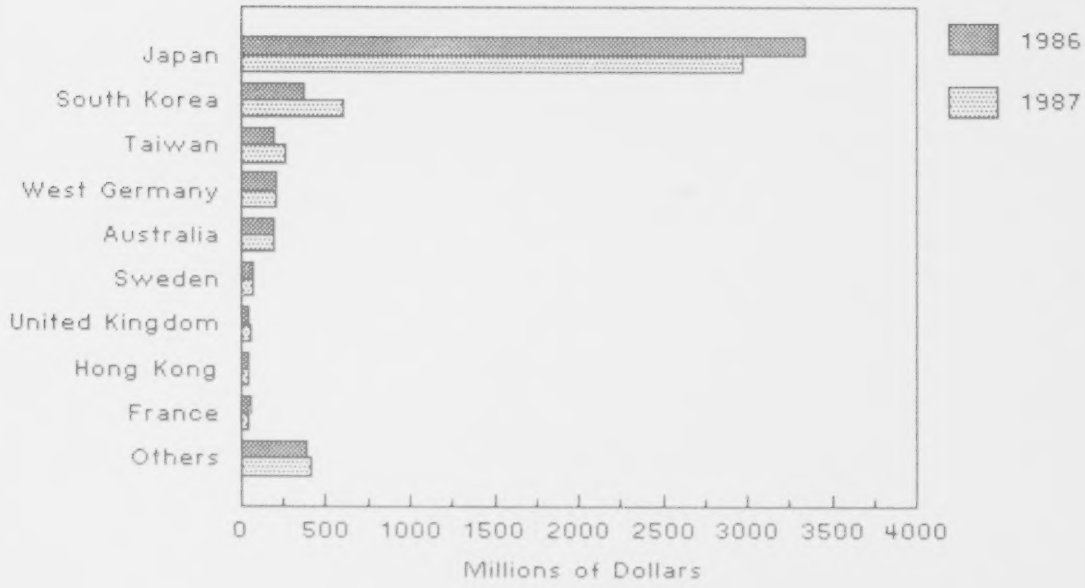


Table V-2 provides the total value of exports and imports for the top twenty-five countries. The countries are ranked by the value of their total trade with the Columbia-Snake River Customs District.

Table V-2
1987 International Trade Flow by Country
through the Columbia-Snake River Customs District
In Thousands of Dollars

Country	Exports	Imports	Total Trade
Japan	$1,721,623	$2,969,323	$4,690,946
South Korea	378,784	598,479	977,263
Taiwan	211,226	258,233	469,459
Australia	82,347	193,988	276,335
West Germany	19,075	206,324	225,399
China	178,972	37,767	216,739
Saudi Arabia	146,200	5,092	151,292
Egypt	146,377	6	146,383
Philippines	91,328	37,555	128,883
Italy	87,904	27,234	115,138
Hong Kong	59,972	41,598	101,570
Sweden	15,282	69,825	85,107
United Kingdom	20,621	57,600	78,221
France	25,823	41,030	66,853
Indonesia	44,044	17,670	61,714
Malaysia	25,877	30,960	56,837
Netherlands	27,123	26,393	53,516
Thailand	21,234	20,436	41,670
Canada	12,945	26,309	39,254
Bangladesh	30,492	1,934	32,426
Belgium/Luxembourg	15,593	15,520	31,113
Spain	22,454	8,531	30,985
Singapore	18,613	9,887	28,500
Denmark	23,150	5,066	28,216
Sri Lanka	24,998	1,687	26,685
Others	171,953	142,599	314,552
Total	$3,624,010	$4,851,046	$8,475,056

Source: Oregon International Trade Institute.

Table V-3 shows the total exports and imports for the top twenty-five traded products. The products are ranked by the total trade volume of these products through the Columbia-Snake River Customs District.

Table V-3
1987 International Trade Flows by Product
through Columbia-Snake River Customs District
In Thousands of Dollars

Product	Exports	Imports	Total Trade
Motor Vehicles	$4,481	$2,900,991	$2,905,472
Grains	1,540,820	895	1,541,715
Logs & Timber	485,419	15	485,434
Chemicals/Petro Prods	145,804	295,141	440,945
Metals	85,984	279,531	365,515
Paper Products	323,817	34,107	357,924
Lumber Products	249,312	12,402	261,714
Gen'l Machinery	71,040	114,741	185,781
Foot & Headgear	315	169,475	169,790
Electric Machinery	3,916	138,791	142,707
Wood Chips	134,805	32	134,837
Animal/Veg Oil	76,225	41,548	117,773
Computing Equip	10,184	106,065	116,249
Vegetables	103,555	8,665	112,220
Electronic Components	3,776	97,864	101,640
Nonmetallic Minerals	66,714	30,983	97,697
Communications Equip	1,143	89,385	90,528
Plywood & Veneer	61,495	27,606	89,101
Rubber/Plastic	2,795	82,339	85,134
Vehicle Parts	6,847	61,423	68,270
Textiles	5,503	56,783	62,286
Hides & Skins	61,065	427	61,492
Nuts/Sugar/Coffee/Bev	26,867	33,529	60,396
Measuring/Controls	1,000	52,469	53,469
Other Animal/Veg Prod	39,495	4,955	44,450
Other Products	111,633	210,884	322,517
Total	$3,624,010	$4,851,046	$8,475,056

Source: Oregon International Trade Institute.

Chapter VI
Economic Projections

For the State of Oregon, projections are made by the Office of Economic Analysis in the Executive Department. The primary purpose of these projections is to forecast state revenues to assist policymakers monitoring and planning the state government budget.

Oregon subscribes to the WEFA (formerly Wharton Economic Forecasting Associates, Inc.) econometric model of the U.S. economy. The State Economist, Ann Hanus, is responsible for a model of the Oregon economy. Since the state's economy is primarily driven by national economic conditions, the WEFA national model strongly influences the Oregon econometric model.

The Office of Economic Analysis issues forecasts quarterly. The figures in this chapter are from the second quarter 1988 forecast. Subscriptions are available for $20 a year or $5 a issue from: Oregon Economic Forecast, Budget and Management Division, Executive Department, 155 Cottage St. NE, Salem, Oregon 97310.

Following is an excerpt from the Oregon Economic and Revenue Forecast, June 1988:

"Oregon's economy should outpace the U.S. economy through 1989. The state's projected growth in total nonagricultural employment for 1988 should exceed 1987. Oregon is projected to grow by 3.9 percent in 1988 and 1.7 percent in 1989, while U.S. employment increases by 2.4 percent and 1.3 percent, respectively.

"Oregon total personal income growth will nearly equal the U.S. rate through 1989. In 1987, Oregon personal income increased by 5.0 percent, while the U.S. grew at 6.0 percent. Oregon personal income is expected to rise by 6.4 percent in 1988 and 6.6 percent in 1989, while the U.S. grows by 6.1 percent and 6.6 percent, respectively.

"Employment gains from the fourth quarter of 1987 to the fourth quarter of 1988 are expected to total 37,300, up 14,100 from the March forecast. From 1988 to 1989 (fourth quarter to fourth quarter), employment growth should total 12,600, up 3,000 from March.

"Wharton continues to expect a national slowdown, but not a recession, in late 1989 and early 1990. Employment growth before the recession is about as strong at they expected in March, but employment growth after the recession exceeds the previous forecast.

"Manufacturing employment should increase by 3.7 percent, or 7,600, in 1988. Much of this growth occurred in the first quarter, when employment rose by 5,500. Job growth will be more moderate over the rest of the year, with lumber and wood, metals, food, and paper employment remaining steady. Instruments employment will drop through most of the year, while machinery, textiles, and printing and publishing show solid employment gains.

"Nonmanufacturing employment gains will be dominated by the retail and wholesale trade, services, and construction sectors in 1988. Of the 34,600 nonmanufacturing jobs expected to be added in 1988, 14,600 will come from trade, 9,200 from services, and 2,800 from construction. Retail trade will be boosted by new store openings while construction is pushed up by strong housing starts, public works projects, and increased private nonresidential construction.

"These large employment gains will produce above average population growth in 1988. While the U.S. population is growing by 0.95 percent, Oregon population is expected to increase by 1.24 percent, the strongest growth since 1980.

"Oregon housing is expected to prosper over the next two years. Starts reached 10,900 in 1987 and are expected to total 12,400 in 1988 and 12,000 in 1989. U.S. housing starts are expected to fall in 1988 because of increases in mortgage rates, but Oregon's population increase should help support the state's housing sector."

Table VI-1
Oregon Economic Projections
In Thousands unless Specified Otherwise

	1986	1987	1988	1989	1990	1991
Population	2,659	2,690	2,723	2,740	2,760	2,778
Nonag Employment	1,058.53	1,093.98	1,136.10	1,155.77	1,164.44	1,177.29
Manufacturing	198.40	204.95	212.52	214.15	213.72	218.01
Durable Goods	143.42	148.17	154.54	155.33	154.57	157.69
Lumber & Wood	64.58	67.46	69.98	69.15	68.90	68.63
Machinery	27.94	28.94	30.91	32.27	32.42	34.71
Instruments	13.10	12.12	11.60	11.39	11.14	11.23
Other Durable	37.80	39.65	42.05	42.53	42.11	43.11
Nondurable Goods	54.97	56.78	57.98	58.82	59.15	60.33
Food Products	23.73	23.84	23.61	23.65	23.59	23.74
Other Nondurable	31.24	32.94	34.37	35.17	35.56	36.59
Nonmanufacturing	860.13	889.03	923.58	941.62	950.72	959.27
Construction	34.31	34.51	37.29	39.11	39.03	38.86
Mining	1.45	1.43	1.47	1.65	1.75	1.74
Trans, Comm, Util	57.24	58.29	59.91	60.54	60.46	60.81
Trade	267.26	276.25	290.83	297.30	300.00	303.88
Fin, Ins, RE	69.48	71.65	74.14	75.85	76.55	77.14
Services	230.24	242.41	251.57	256.85	260.00	265.24
Government	200.16	204.53	208.43	210.35	212.97	211.63
Personal Income (In Millions of $'s)	36,030	37,830	40,260	42,900	45,400	48,070
Manuf Avg Hourly Wage	$10.58	$10.55	$10.78	$11.23	$11.70	$12.15
New Housing Starts	9.85	10.93	12.38	11.97	12.22	12.31
CPI PDX (1982-84=100)	108.2	110.9	115.1	119.5	123.8	127.8
Percent Change	1.4%	2.5%	3.8%	3.9%	3.6%	3.2%

Source: Office of Economic Analysis, Oregon Executive Department.

Figure VI-1
Percent Change in Nonagricultural Employment

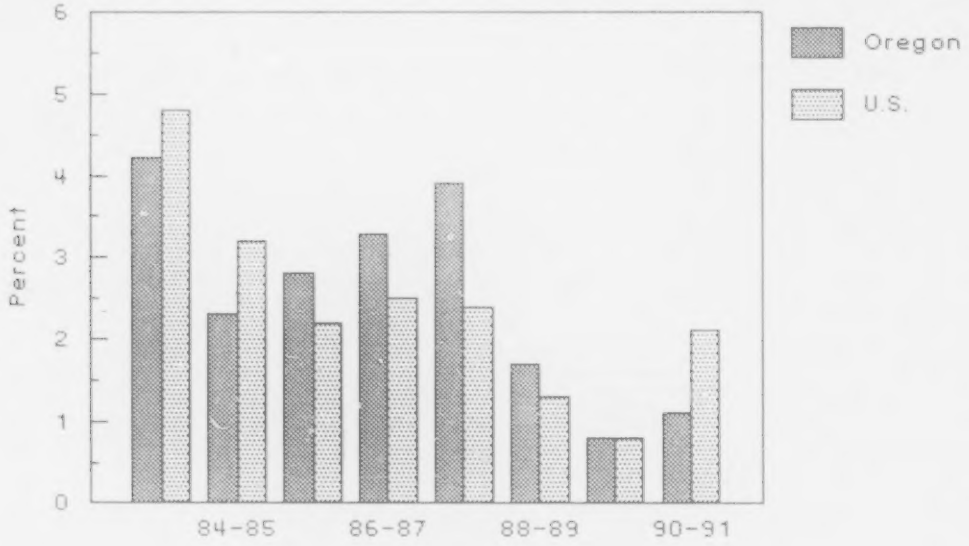


Figure VI-2
Percent Change in Personal Income

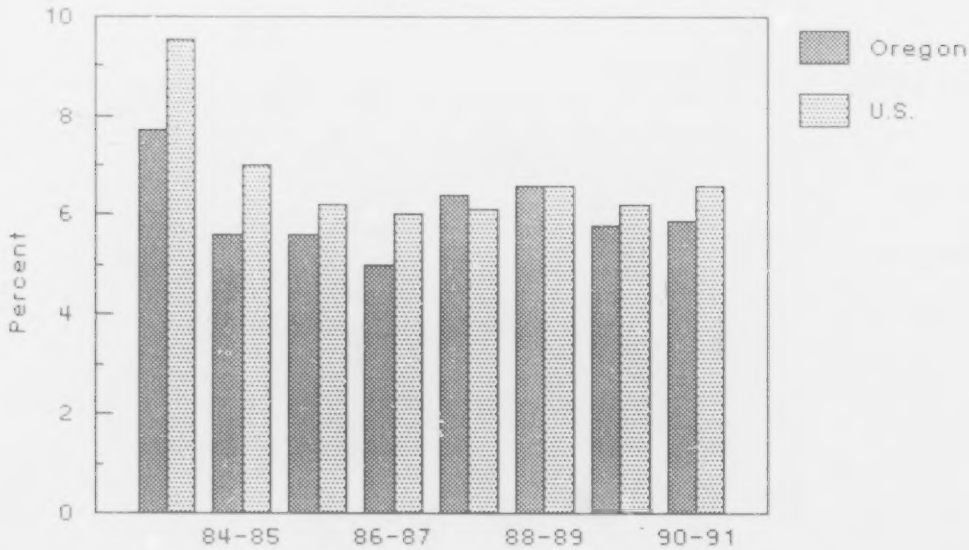


Table VI-2
U.S. Economic Projections
In Millions Unless Specified Otherwise

	1986	1987	1988	1989	1990	1991
Population	241.63	243.82	246.14	248.35	250.59	252.84
Nonag Employment	99.61	102.10	104.57	105.90	106.74	108.98
Manufacturing	19.00	19.11	19.60	20.00	20.17	20.94
Durable Goods	11.24	11.24	11.63	11.98	12.15	12.79
Lumber & Wood	0.71	0.74	0.77	0.78	0.79	0.80
Machinery	4.18	4.13	4.26	4.40	4.42	4.73
Instruments	0.71	0.69	0.71	0.75	0.78	0.84
Other Durable	5.64	5.67	5.89	6.05	6.16	6.42
Nondurable Goods	7.75	7.87	7.97	8.02	8.02	8.15
Food Products	1.62	1.63	1.62	1.61	1.59	1.60
Other Nondurable	6.13	6.24	6.35	6.41	6.43	6.55
Nonmanufacturing	80.61	82.99	84.97	85.89	86.57	88.05
Construction	4.90	5.01	5.04	5.01	4.96	5.00
Mining	0.78	0.75	0.78	0.77	0.77	0.78
Trans, Comm, Util	5.24	5.37	5.47	5.54	5.58	5.67
Trade	23.58	24.01	24.21	24.55	24.89	25.35
Fin, Ins, RE	6.30	6.59	6.84	7.39	8.25	9.07
Services	23.10	24.21	24.74	24.71	24.29	24.27
Government	16.71	17.06	17.41	17.61	17.75	17.87
Personal Income:	3,534.30	3,746.50	3,973.18	4,234.46	4,497.30	4,793.59
Other Economic Indicators:						
Manuf Avg Hourly Wage	$9.73	$9.93	$10.30	$10.88	$11.52	$12.13
New Housing Starts	1.81	1.63	1.49	1.37	1.47	1.52
GNP Billions of $'s	3,713.25	3,821.05	3,931.87	4,028.45	4,102.59	4,223.19
U.S. Purchasers Index (1977=100)	125.08	129.81	135.94	140.29	142.59	152.37
U.S. Annual Deficit (In Billions of $'s)	(204.68)	(151.80)	(170.37)	(171.32)	(157.20)	(116.28)
Interest Rates:						
Prime Rate	8.33	8.20	8.77	10.23	9.25	8.59
New Home Mtg Rate	10.25	9.32	9.30	10.59	10.11	9.39
Deflators:						
CPI U.S. (1982-84=100)	109.6	113.6	117.9	122.9	128.3	133.5
Percent Change	1.9%	3.7%	3.8%	4.3%	4.4%	4.0%
Personal Consumption Expenditure Deflator (1982=100)	114.22	118.85	123.51	129.19	135.27	140.41

Source: Office of Economic Analysis, Oregon Executive Department.

Chapter VII
The Consumer Price Index

The Consumer Price index is one of the most-used statistics. This chapter explains what it is and how to use it.

The Consumer Price Index (CPI) is a weighted average of the prices paid by urban consumers for a fixed market basket of goods and services over time. The basket of goods is composed of seven major expenditure groups--food and beverages, housing, apparel and upkeep, transportation, medical care, entertainment, and other goods and services that people buy for day-to-day living. These seven major groups are broken down into 69 expenditure classes, which in turn are divided into 184 items, such as cereal, college tuition, and men's suits.

The items in the basket of goods and services and the weight given to each item in the basket are determined from surveys conducted jointly by the Bureau of Labor Statistics and the Bureau of the Census. The most important of these surveys is the Consumer Expenditure Survey, which was last conducted between 1982 and 1984. The process of compiling and calculating the expenditure weights takes about 3 years. The Rent Survey covers costs of rent, fuel, telephone, garage space, furniture, water, etc. The Consumer Expenditure Survey and the Rent Survey determine what consumers buy. The Point-of-Purchase Survey which surveys a representative sample of retail stores, mail houses, bowling alleys, doctors' offices, etc, determines where people buy.

The published indices did not reflect the 1982-84 market basket of goods and services until January 1987. From 1978 through 1986 the CPI was based on a basket of goods and services derived from surveys taken between 1972 and 1974. **Beginning January 1988 the base year for the CPI has been changed from 1967=100 to 1982-84=100.**

The CPI is constructed for two population groups--all urban consumers (CPI-U) and wage earners and clerical workers (CPI-W). The CPI for all urban consumers includes all urban households regardless of income or employment status. This index covers about 81 percent of all U.S. households and 80 percent of the total noninstitutional population. The CPI-U was first computed in 1978.

The CPI for wage earners and clerical workers is comprised of all urban households that derive more than one-half of their income from clerical or wage occupations and have been employed for at least 37 weeks in the last 12 months. This index covers approximately 38 percent of all households and 42 percent of the noninstitutional population. The CPI-W is the original basis for the CPI, and all indices prior to 1978 are based on this definition.

Both the CPI-U and the CPI-W exclude households outside metropolitan areas, the military, and individuals in institutions. The CPI-W additionally excludes the unemployed and retired households.

Prior to the 1987 revision, indices were published for 28 local areas plus the U.S. city average. Beginning in 1987, one local area was dropped and the frequency of publishing 14 of the remaining 27 areas has changed.

The Portland-Vancouver, Oregon-Washington index, formerly estimated every other month, is now only estimated twice a year. The Portland index currently computed is not for a particular month, as was the case prior to 1987. The index, now the average semiannual change in prices, is published for July, with a release date of August 26, and for January, with a release date of February 26.

This change in the way the Portland index is estimated means that the bimonthly indices published prior to 1987 are not comparable to the new estimates. Annual estimates for Portland and the U.S. city average are presented in Table VII-1. The Portland CPI-U for the second half of 1987 is presented in Table VII-2.

How to Use the CPI

The local area indices do not measure differences in the level of prices among cities; they only measure the average change in prices for each area since the base period. The percent change in prices between cities can be compared; however, this says nothing about the beginning difference in prices between cities. For instance, if the CPI-U for Los Angeles increased 100 percent from the base year, its index number would be 200.0. Furthermore, if Portland's CPI-U increased 75 percent from the base period, its index would be 175.0. The percent changes can be compared, for example: "Prices in Los Angeles have increased 25 percent more than prices in Portland" is a correct statement. However, the index numbers are not comparable, for example: "The prices paid in Los Angeles are 12.5 percent higher than prices in Portland" is an inaccurate statement given the above information.

The percent change over a 12-month period is calculated by taking the difference between starting index and the ending index, dividing by the starting index, and multiplying by 100. The percent change between two periods that are longer than one year is calculated using the formula for compound growth rates. The resulting percent is an annual average change in prices.

One of the major uses of the CPI is as a cost-of-living index. However, the CPI is a price index, not a cost-of-living index. The CPI does not:

1. Include income and social security taxes, since unlike sales taxes, these costs are not associated directly with retail prices for specific goods and services. A true cost-of-living index would account for all taxes.

2. Immediately reflect changes in expenditure patterns. For example, the increased use of convenience foods and the rise in the popularity of fast-food restaurants were established trends well before these changes in expenditure patterns could be incorporated into the CPI.

3. The CPI does not attempt to report changes in lifestyles, and does not include noncash income such as fringe benefits or barter transactions, or government payments to businesses and individuals.

It is generally agreed that the CPI tends to overstate increases in the cost of living. Studies attempting to estimate by how much have shown very little difference in the overall city average index. However, the differences are greater during unstable economic periods such as the latter half of the 1970's.

When stating income or payrolls in constant dollars, the U.S. implicit price deflator for personal consumption expenditures is a more appropriate deflator than the CPI. The U.S. Department of Commerce publishes deflators for GNP and its components in the Survey of Current Business. Table VII-3 presents some of these deflators.

Caution should be used when using the CPI for wage or rent escalators. A landlord's alternative, to using the CPI, is to examine what has happened to the prices he/she is paying in taxes, insurance, repairs, etc. The prices each of us experience are different from the average prices that the households surveyed experience, and each of our expenditure patterns are different.

Figure VII-1
Consumer Price Index for All Urban Consumers

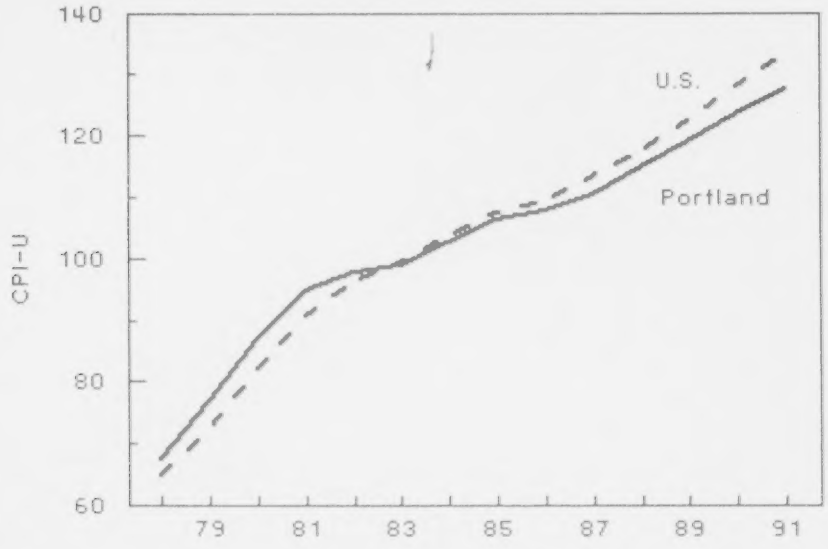


Figure VII-2
Percent Change in the CPI-U

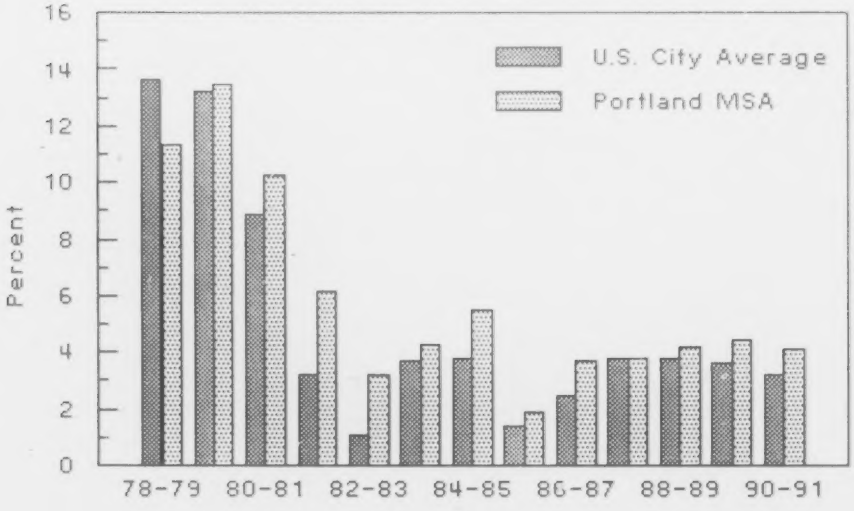


Table VII-1
Consumer Price Indices, 1976-87

	Portland CPI-W (1967=100)	Portland CPI-W (1982-84 =100)	Portland CPI-U (1967=100)	Portland CPI-U (1982-84 =100)	U.S. CPI-W (1967=100)	U.S. CPI-W (1982-84 =100)	U.S. CPI-U (1967=100)	U.S. CPI-U (1982-84 =100)
1976	167.0	57.9			170.5	57.2		
1977	180.2	62.5			181.5	60.9		
1978	199.0	69.0	198.4	67.8	195.3	65.6	195.4	65.2
1979	225.8	78.3	225.4	77.0	217.7	73.1	217.4	72.6
1980	254.1	88.2	255.4	87.2	247.0	82.9	246.8	82.4
1981	276.2	95.8	278.2	95.0	272.3	91.4	272.4	90.9
1982	284.7	98.8	287.0	98.0	288.6	96.9	289.1	96.5
1983	285.8	99.2	290.1	99.1	297.4	99.8	298.4	99.6
1984	294.2	102.1	301.0	102.8	307.6	103.3	311.1	103.9
1985	302.9	105.1	312.4	106.7	318.5	106.9	322.2	107.6
1986	305.5	106.0	316.8	108.2	323.4	108.6	328.4	109.6
1987	312.7	108.5	324.7	110.9	335.0	112.5	340.4	113.6
Projections:								
1988			337.0	115.1			353.2	117.9
1989			349.8	119.5			368.2	122.9
1990			362.4	123.8			384.3	128.3
1991			374.1	127.8			399.8	133.5
Annual Average Inflation Rates:								
1950-87	4.1%	4.1%			4.2%	4.2%		
1950-60	1.3%	1.3%			1.3%	1.3%		
1960-70	2.7%	2.7%			2.7%	2.7%		
1970-80	8.4%	8.4%			7.8%	7.8%		
1980-87	3.0%	3.0%	3.5%	3.5%	4.4%	4.4%	4.7%	4.7%
1977-87	5.7%	5.7%			6.3%	6.3%		
1985-86	0.9%	0.9%	1.4%	1.4%	1.5%	1.5%	1.9%	1.9%
1986-87	2.4%	2.4%	2.5%	2.5%	3.6%	3.6%	3.7%	3.7%
Projections:								
1987-88			3.8%	3.8%			3.8%	3.8%
1987-91			3.6%	3.6%			4.1%	4.1%

Source: U.S. Bureau of Labor Statistics. Projections--Office of Economic Analysis, Oregon Executive Department.

Table VII-2
Portland Consumer Price Index for All Urban Consumers
1982-84=100

	Index 2nd half 1987	Percent Change from: 2nd half 1986	1st half 1987
All Items	111.9	3.3%	1.8%
Food & Beverages	110.9	2.0%	(0.7)%
Housing	109.2	2.9%	2.0%
Shelter	114.1	3.7%	2.3%
Rent	115.2	3.4%	1.8%
Other renters' costs	120.6	0.0%	(0.5)%
Homeowners' costs	117.4	4.1%	2.3%
Utilities	101.2	0.8%	0.2%
Household furnishings & operation	104.1	2.3%	2.5%
Apparel & Upkeep	105.7	5.3%	7.3%
Transportation	110.2	3.5%	1.9%
Medical Care	129.8	7.7%	4.9%
Entertainment	117.7	4.1%	1.9%
Other Goods & Services	130.1	6.4%	2.2%

Source: U.S. Bureau of Labor Statistics, CPI Detailed Report, January 1988, p 126.

Table VII-3
Implicit Price Deflators

	Personal Consumption Expenditures	Exports	Imports
1977	66.7	68.0	59.8
1978	71.6	72.8	65.8
1979	78.2	81.6	77.1
1980	86.6	90.2	96.0
1981	94.6	97.5	101.6
1982	100.0	100.0	100.0
1983	104.1	101.3	97.4
1984	108.1	103.2	97.1
1985	111.8	101.3	94.8
1986	114.3	99.7	92.1
1987	118.8	100.5	97.5

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Chapter VIII
Forest Products Industry

Oregon has benefited from the increased demand for lumber and wood products and paper products. Output has been increasing and prices, on the average, increased five percent between 1986 and 1987. International exports through the Columbia-Snake Customs District increased 25.6 percent from 1986 to 1987. Export and domestic sales have improved as a result of a 15 percent tax on Canadian shipments of softwood lumber to the U.S., the lower value of the dollar, and tariff concessions to the U.S. from Japan, South Korea, and Taiwan.

Since the 1970's, Oregon's forest products industry has increased investment in equipment. This has increased productivity and aided Oregon's forest products industry in becoming more competive in world markets. However, translates into fewer jobs. Forest Products employment in 1986 was down by 15,958 jobs from 1977, a decline of 17.8 percent.

Table VIII-1 shows value of output and employment in forest products for 1977 and 1986. In this chapter, employment figures are from the Oregon Employment Division's Covered Employment and Payrolls series, which provides reliable and detailed estimates of employment and payrolls by industry. It includes all workers covered by unemployment insurance--about 90 percent of total employment. Figures VIII-1 and VIII-2 provide a look at output and employment in forest products, 1976-86.

Table VIII-2 provides timber harvest figures by land ownership. Figure VIII-3 shows the shares of forest harvest by ownership.

Tables VIII-3 and VIII-4 illustrate international trade in forest products through the Columbia-Snake Customs District.

Figure VIII-1
Forest Products Output, 1976-86

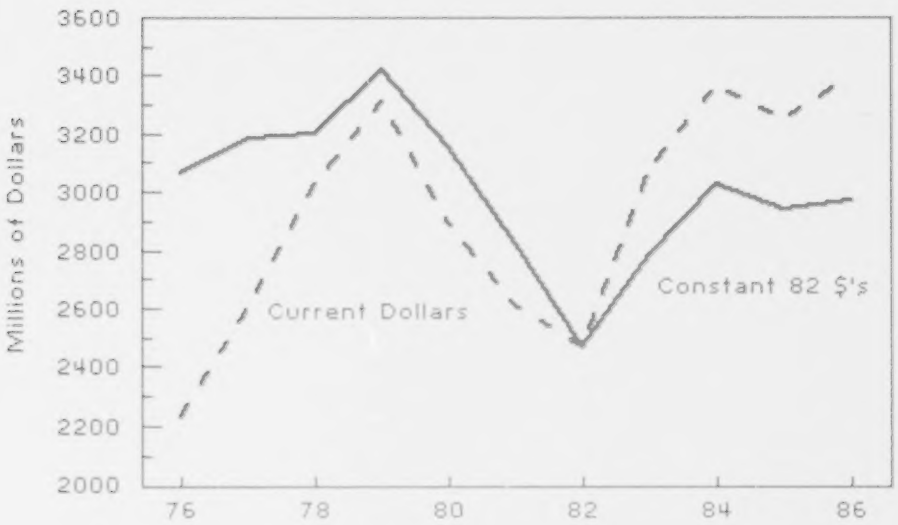


Figure VIII-2
Forest Products Employment, 1976-86

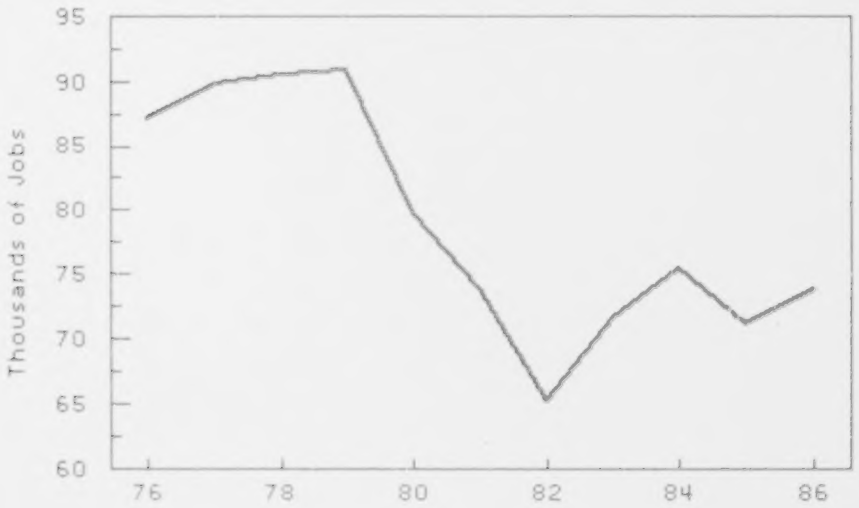


Table VIII-1
Forest Products Output and Employment

	1977	1986
Gross State Product:		
Millions of $'s	2,905	3,085
Millions of 82 $'s	3,574	2,704
Employment:		
Lumber & Wood Products	79,484	64,790
Logging	12,854	12,186
Sawmills	27,947	21,919
Millwork, Veneer, Plywood	31,683	25,701
Wood Containers	606	269
Wood Bldg & Mobile Homes	2,837	1,596
Misc Wood Products	3,557	3,119
Paper & Allied Products	10,357	9,093
Average Annual Payrolls in 1982 Constant Dollars:		
Lumber & Wood Products	22,595	20,227
Logging	22,561	19,745
Sawmills	23,297	21,779
Millwork, Veneer, Plywood	22,807	19,638
Wood Containers	10,144	11,875
Wood Bldg & Mobile Homes	18,321	15,083
Misc Wood Products	20,835	19,417
Paper & Allied Products	26,688	30,755

Sources: Gross State Product and Price Deflator--Bureau of Economic Analysis, U.S. Department of Commerce.
Employment and Payrolls--Oregon Employment Division.

Table VIII-2
Timber Harvest by Land Ownership, 1977-87
In Thousands of Board Feet

Year	Forest Industry	Other Private	National Forest	BLM	State	Other Public	Total
1977	3,140,818	449,057	2,881,290	1,051,992	227,914	125,317	7,876,388
1978	3,162,788	386,697	3,232,231	837,468	234,667	142,825	7,996,676
1979	2,953,381	255,466	3,167,043	955,832	223,431	139,186	7,694,339
1980	2,929,545	204,496	2,340,344	855,635	185,699	123,730	6,639,449
1981	2,522,166	180,073	1,981,073	677,020	215,843	118,980	5,695,155
1982	3,220,731	219,260	1,687,634	312,105	174,562	143,610	5,757,902
1983	3,124,366	249,320	2,760,161	928,414	258,822	142,905	7,463,988
1984	2,768,391	310,116	3,163,564	919,545	249,131	139,016	7,549,763
1985	3,008,925	323,177	3,480,205	891,330	268,218	155,400	8,127,255
1986	3,065,863	427,706	3,850,238	1,041,557	225,291	131,969	8,742,624
1987	N/A	N/A	3,451,337	1,115,126	N/A	126,111	4,692,574

Source: Oregon Department of Forestry.

Figure VIII-3
Timber Harvest by Ownership, 1986

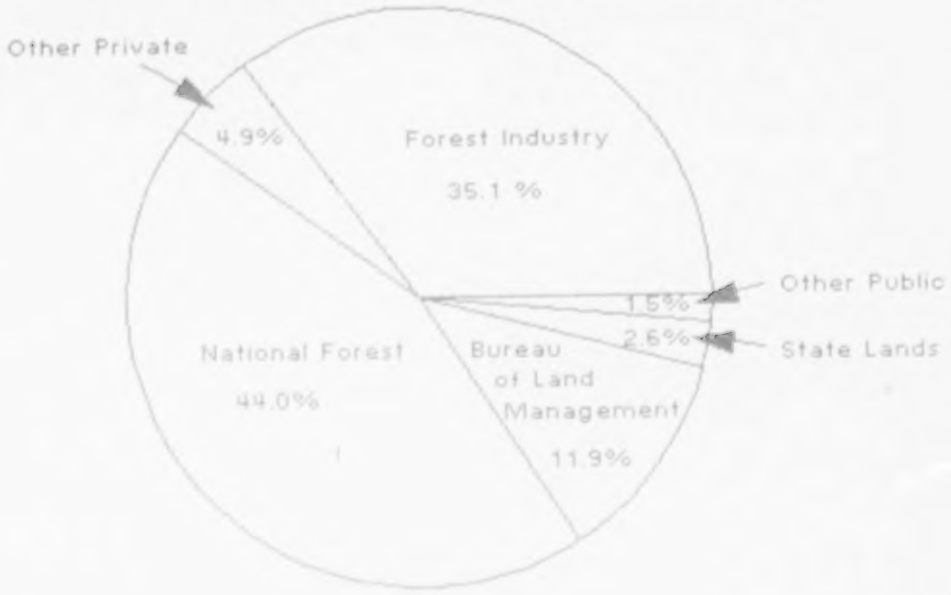


Figure VIII-4
Forest Products Exports, 1986
Columbia-Snake Customs District

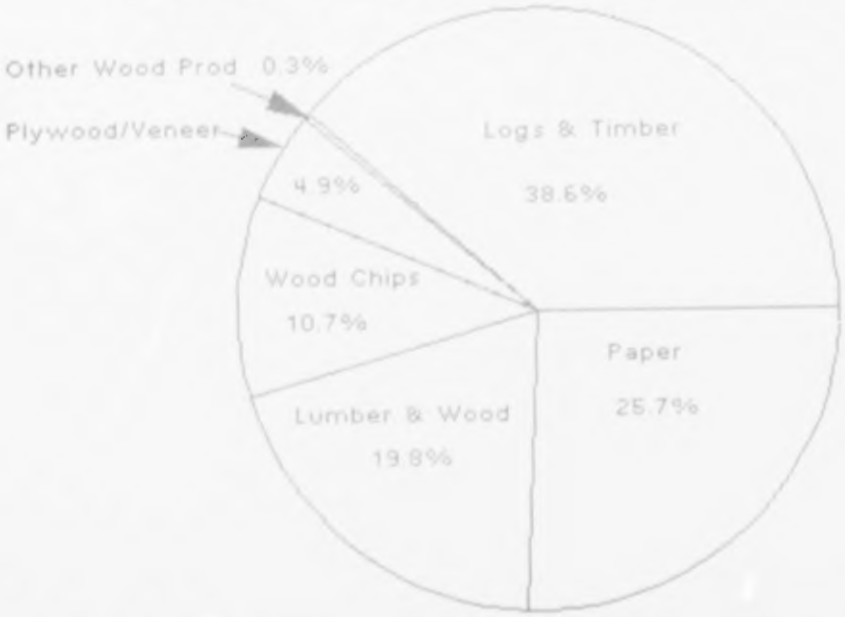


Table VIII-3
Forest Products Exports through the Columbia-Snake Customs District

	1984	1985	1986	1987
Exports				
Logs/Timber	336,727	389,517	380,847	485,419
Paper	300,784	266,778	285,824	323,817
Lumber & Wood Products	200,142	174,814	170,292	249,312
Wood Chips	116,022	120,825	113,665	134,805
Plywood/Veneer	41,880	28,172	48,738	61,495
Other Wood Products	2,224	2,809	2,358	3,694
Total Forest Products	997,779	982,915	1,001,724	1,258,542
Total Exports	4,119,881	3,462,242	3,110,694	3,624,010
Forest Prod as Percent of Total Exports	24.2%	28.4%	32.2%	34.7%
Imports				
Logs/Timber	13	13	12	15
Paper	20,657	23,078	31,820	34,107
Lumber & Wood Products	14,280	14,407	8,715	12,402
Wood Chips	4	0	0	32
Plywood/Veneers	23,458	20,360	20,214	27,606
Other Wood Products	7,006	5,629	7,138	7,941
Total Forest Products	65,418	63,487	67,899	82,103
Total Imports	3,849,041	4,073,977	4,916,794	4,851,046
Forest Prod as a Percent of Total Imports	1.7%	1.6%	1.4%	1.7%

Table VIII-4
Top Destinations for Forest Products through the Columbia-Snake Customs District

	1984	1985	1986	1987
Japan	635,551	645,885	722,892	882,675
Italy	44,886	34,523	46,023	75,890
Australia	82,126	73,469	40,044	54,649
China	96,467	125,786	53,923	48,910
Denmark	10,413	8,163	19,282	22,280
South Korea	16,226	14,975	12,835	22,261
Spain	6,236	3,947	6,862	13,219
Hong Kong	11,553	15,346	12,860	12,028
Taiwan	10,258	7,792	9,189	10,741
France	5,388	6,038	8,132	10,370
Philippines	2,131	887	4,173	5,152
Netherlands	1,636	2,203	4,214	2,938
Malaysia	79	76	1,330	1,812
Saudi Arabia	4,178	3,070	3,213	1,701
Other Countries	70,651	40,755	56,752	93,916
Total Forest Products	997,779	982,915	1,001,724	1,258,542

Source: Oregon International Trade Institute.

Forest Products and the Oregon Business Growth/Decline Study

The Oregon Economic Development Department has recently completed a study of business starts, stops, expansions, and contractions. This project was funded in part by the U.S. Economic Development Administration. Copies of the report are available from Henry Markus of the Economic Development Department. The Study provides data by size of firm. However, due to confidentiality of the data at the level of detail shown in Tables VIII-5 and VIII-6, data by size of firm is not provided.

Table VIII-5 shows the number of firms by three digit Standard Industrial Classification (SIC) Code.

SIC	Industry
241	Logging
242	Sawmills
243	Millwork, Veneer, and Plywood
245	Wood Containers
246	Wood Buildings & Mobile Homes
249	Miscellaneous Wood Products

Notice that employment estimates for all of lumber and wood products, in two-digit SIC 24, show a net change of only 8 firms. The Growth/Decline database reveals that behind the change of eight firms, 251 firms started business and 243 went out of business. This tremendous level of change within the economy has not previously been documented. The column titled Firms Expanding gives the number of firms that increased employment between 1985 and 1986.

Table VIII-5
Lumber and Wood Products Firms
Starts, Stops, Expansions, and Contractions, 1985-86

SIC	Number of Firms 85	New Firms	Stop Firms	Firms Expanding	Firms Contracting	Number of Firms 86
241	1,377	175	168	528	382	1,384
242	304	33	26	134	96	311
243	306	15	28	144	77	293
244	25	3	3	9	9	25
245	29	5	0	15	11	34
249	123	20	18	44	39	125
Total	2,164	251	243	874	614	2,172

Source: Oregon Business Growth Decline Study, Oregon Economic Development Department.

Conventional employment data would reveal that 950 new jobs were created in lumber and wood products between 1985 and 1986. But in Table VII-6, we can see that 1,067 people lost jobs in firms that closed and 6,211 people lost

jobs in firms that reduced employment. Most of these people found jobs in new or growing firms.

Table VIII-6
Lumber and Wood Products Industry
Number of Employees affected by Firm
Starts, Stops, Expansions, and Contractions, 1985-86

SIC	Number of Employees 1985	Employees in New Firms	Employees in Stop Firms	Employees in Expanding Firms	Employees in Contracting Firms	Number of Employees 1986
241	11,208	532	459	1,873	1,884	11,270
242	23,474	486	287	2,323	2,288	23,943
243	28,804	120	184	2,192	1,672	29,260
244	263	17	19	44	25	280
245	1,575	11	0	159	159	1,586
249	1,731	70	118	136	183	1,636
Total	67,055	1,236	1,067	6,727	6,211	67,975

Source: Oregon Business Growth/Decline Study, Oregon Economic Development Department.

The following is adapted from the Oregon Business Growth/Decline Study cited above:

Restructuring of the forest products industry accounted for a large share of the increase of new small firms in the Oregon economy between 1981 and 1986. Table VIII-7 shows that small logging, sawmills, and plywood firms dominated growth in the two smallest size classes in manufacturing. For example, in 1986, over one-fourth of the jobs created in the smallest size class were in these three industries, and while manufacturing firms in the 20-99 size class were losing a net of 210 jobs, logging, sawmills, and plywood firms in that size class were adding 795 jobs.

Table VIII-7. Net Employment Growth for Logging, Sawmills, Plywood

	Size 0-19			Size 20-99		
	Logging Sawmills Plywood	Total Mfg.	Pct. Total	Logging Sawmills Plywood	Total Mfg.	Pct. Total
1982-83	2,043	4,314	47.4%	1,548	1,875	82.6%
1983-84	1,201	5,066	23.7%	767	3,487	22.0%
1984-85	539	3,008	17.9%	340	692	49.1%
1985-86	1,111	4,162	26.7%	795	-210	NA

Source: Oregon Trends Report, Oregon Business Growth/Decline Study, Oregon Economic Development Department.

The restructuring of the forest products industry included three distinct dynamics:

Productivity Improvements. Especially in sawmills and plywood mills, but also in paper products, the industry automated production lines and cut excess labor and middle management. Automation and retrenchment had disparate effects on different size classes. If two firms each cut employment by 10%, the larger firm lost more employees. Similarly, if a small firm added state-of-the-art capacity while a large firm modernized existing capacity, the smaller firm would show an increase in employment while the larger firm would show a contraction.

Changes in Industry Structure. During the 1960's, many forest product industry firms became fully integrated, combining logging, sawmills, plywood, and paper operations. In the 1980's, the opposite happened. In particular, several large corporations spun off their logging operations. As lumber demand picked up after the recession, logging employment grew rapidly. However, instead of being employed in expanding large firms, unemployed loggers either started their own independent operations or were picked by small independents. Thus, logging shows up in the data as the leading growth industry in the smallest size class.

Changes in Ownership. Industry reorganization including closures of antiquated mills, buyouts, sales of assets to independents, and withdrawal from Oregon of at least one large firm. In general, there was a shift from large multistate or multinational firms to smaller, Oregon- or Northwest-based firms. As much as possible, shifts in mill ownership were cleansed from the data base, so that declines actually represent layoffs, and expansions represent new hires. The effect of changes in ownership, however, was that employment losses in the recession years were charged against large firms, while later employment gains accrued to smaller firms.

In addition to restructuring of the traditional wood products industry, a major growth market in millwork was developed in the 1980's. From 1981 to 1986, millwork was the fastest growing manufacturing industry. A mix of local independent producers and branches of out-of-state corporations started and expanded operations in Oregon. Growth was spread across all firm sizes.

In addition to the sources cited in this chapter, other sources of information concerning Oregon's forest products industry available in most libraries:

Publications of the Pacific Northwest Research Station, U.S. Forest Service. In particular--Production, Prices, Employment, and Trade in Northwest Forest Industries, by Debra D. Warren. This is a quarterly publication. Also, Oregon's Forest Products Industry: 1986, by James O. Howard.

Publications of the Western Wood Products Association, Portland. In particular--Barometer, a weekly report of lumber production and shipments.

Publications of Oregon State University's School of Forestry.

Chapter IX
Oregon's Agricultural Sector

The real value of agricultural production increased at an average annual rate of 5.4 percent between 1977 and 1986. Figure IX-1 graphs Oregon's gross farm output in both current and constant 1982 dollars. Table IX-1 shows the derivation of gross state farm product. Appendix Table IX-1 provides further details.

The value of farm exports through the Columbia-Snake Customs District are declining as a share of total exports. However, farm exports still account for more than 50 percent of the exports through the Columbia-Snake Customs District. In 1981, 63.5 percent of total exports were agricultural commodities. By 1987 this figure had dropped to 52.1 percent of total exports. Wheat is by far the largest agricultural export commodity. See Table IX-2.

The majority of the agricultural export commodities through the Columbia-Snake River Customs District were destined to Japan or South Korea. See table IX-3.

Table IX-1
Derivation of Gross Farm Product and Net Farm Income
In Thousands of Dollars

	1977	1985	1986	1977-86 Growth Rate
Total Cash Receipts	1,058,954	1,737,073	1,784,034	6.0%
Total Crops	702,991	1,114,624	1,134,585	5.5%
Total Livestock	355,963	622,449	649,449	6.9%
Other Farm Income	20,400	136,200	146,800	
Home Consumption	23,254	28,600	23,100	
Rental Value Farm Dwellings	128,859	225,700	200,300	
Change in Inventories	(3,100)	(6,700)	(59,100)	
Less:				
Rent to Nonfarm Landlords	22,487	57,200	60,700	
Gross Value of Output	1,205,880	2,063,673	2,034,434	6.0%
Production Expenses	535,757	928,900	837,700	5.1%
Gross Farm Product	670,123	1,134,773	1,196,734	**6.7%**
Constant 82 $'s	826,292	1,193,242	1,326,756	**5.4%**
Net Farm Product	465,996	885,573	1,031,934	**9.2%**
Net Farm Income	210,224	493,773	653,134	**13.4%**
Number of Farms	30.0	37.0	37.0	
Acres in Farms	18,400	18,000	17,900	

Source: Oregon Economic Development Department from U.S. Department of Agriculture data.

Figure IX-1
Oregon's Gross Farm Product

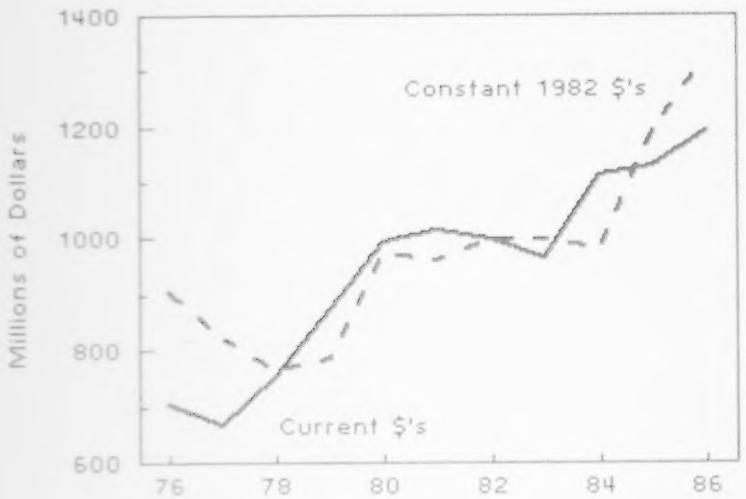


Figure IX-2
Cash Receipts from Oregon Agricultural Commodities, 1986

Table IX-2
Agricultural Exports Through the Columbia-Snake Customs District
In Thousands of Dollars

Exports:	1981	1985	1986	1987	Percent Change 1986-87
Grains	2,289,697	1,724,491	1,422,584	1,540,820	8.3%
Vegetables	76,156	75,365	91,380	103,555	13.3%
Animal/Veg Oil	11,821	17,892	3,349	76,225	2176.1%
Hides & Skins	35,599	53,340	47,929	61,065	27.4%
Other Animal/ Veg Products	6,893	32,094	36,782	39,495	7.4%
Nuts/Sugar/Coffee/ Bev/Tobacco	19,976	12,512	21,598	26,867	24.4%
Live Plants	17,711	20,748	18,057	22,722	25.8%
Meats	8,765	15,987	17,670	11,788	-33.3%
Live Animals	1,622	1,061	1,008	4,093	303.1%
Dairy Products	7,264	3,364	2,674	2,745	2.7%
Agricul Exports	2,475.504	1,956,854	1,663,031	1,889,375	13.6%
Total Exports	3,897,580	3,462,242	3,110,694	3,624,010	16.5%
Percent of Total	63.5%	56.5%	53.5%	52.1%	

Source: Oregon International Trade Institute.

Table IX-3
Destination of Agricultural Exports through Columbia-Snake Customs District
In Thousands of Dollars

Exports:	1981	1985	1986	1987	Percent Change 1986-87
Japan	745,882	953,036	708,602	666,632	-5.9%
South Korea	349,064	376,706	290,901	319,682	9.9%
Taiwan	184,706	244,224	224,079	176,982	-21.0%
Egypt	290,243	41,770	32,168	145,941	353.7%
Saudi Arabia	10,260	145	55,011	142,508	159.1%
China	67,390	3,903	5,878	98,737	1579.8%
Philippines	154,941	115,457	87,999	80,263	-8.8%
Other Countries	673,018	221,613	258,393	258,630	0.1%
Total	2,475,504	1,956,854	1,663,031	1,889,375	13.6%

Source: Oregon International Trade Institute.

Table IX-4, on the following page. is a listing of Oregon's primary agricultural commodities for 1984 through 1986. This figures are from 1986-87 Oregon Agriculture & Fisheries Statistics by the Oregon Agricultural Statistics Service, U.S. Department of Agriculture and the Oregon Department of Agriculture. The Oregon State University Extension Service publishes Oregon County and State Agricultural Estimates. These two sources and the USDA data published in Farm Income Data, from which the Gross State Farm Product figures are derived, use different methods of aggregation, which is confusing in using the data.

Table IX-4
Cash Receipts from Oregon Farm Commodities
In Thousands of Dollars

	1984	1985	1986	Percent Change 1985-86
Cattle & Calves	313,355	303,395	324,044	6.8%
Greenhouse/Nursery	191,755	181,699	203,737	12.1%
Milk	179,404	184,927	183,182	-0.9%
Wheat	254,327	201,329	143,175	-28.9%
Forest Products	101,040	110,405	126,507	14.6%
Potatoes	105,226	77,707	93,191	19.9%
Hay	81,193	76,026	69,425	-8.7%
Pears	36,384	50,245	48,462	-3.5%
Ryegrass Seed	48,566	54,164	48,279	-10.9%
Onions	78,847	45,195	45,169	-0.1%
Fescue Seed	13,233	23,153	32,112	38.7%
Eggs	35,026	27,528	29,710	7.9%
Barley	35,590	30,530	29,662	-2.8%
Strawberries	15,138	15,619	29,107	86.4%
Mint	27,727	28,336	27,937	-1.4%
Sweet Corn	30,006	28,839	26,831	-7.0%
Cherries	14,880	18,307	26,147	42.8%
Hogs	23,848	21,186	25,932	22.4%
Snap Beans	22,588	21,719	24,136	11.1%
Broilers	21,105	21,384	22,752	6.4%
Raspberries	9,843	9,560	18,764	96.3%
Blackberries	12,485	17,340	18,309	5.6%
Sheep & Lambs	16,332	17,221	16,544	-3.9%
Apples	13,615	17,615	16,237	-7.8%
Hops	14,612	17,373	15,154	-12.8%
Bluegrass Seed	6,911	10,680	14,117	32.2%
Sugarbeets	11,206	11,607	13,440	15.8%
Turkeys	7,484	12,090	11,701	-3.2%
Filberts	8,015	16,309	11,283	-30.8%
Other Commodities	179,270	195,990	198,155	1.1%
Total Cash Receipts	1,909,011	1,847,478	1,893,201	2.5%

Source: U.S. Department of Agriculture and Oregon Department of Agriculture, 1986-87 Oregon Agriculture & Fisheries Statistics, p 5. These figures do not correspond with Gross State Product figures since this table includes nonfarm activities such as logging on farm lands.

Appendix Tables

Appendix Table I-1
Oregon's Gross State Product, 1977-86
by Industry in Millions of 1982 Constant Dollars

	1977	1978	1979	1980	1981	1982
Total	31,397	33,793	35,296	34,762	33,614	31,148
Extractive	1,110	1,165	1,261	1,455	1,443	1,413
Farm	829	793	868	1,077	1,070	1,103
Agricultural Services	191	257	282	286	298	263
Mining	90	115	111	92	75	47
Transformative	10,122	10,703	11,165	10,474	9,605	8,387
Construction	2,098	2,267	2,230	1,877	1,374	1,053
Utilities	1,083	1,027	1,018	1,059	1,112	1,005
Manufacturing	6,941	7,409	7,917	7,538	7,119	6,329
Durable Goods	5,211	5,691	6,095	5,792	5,386	4,587
Lumber & Wood Prod	2,929	2,915	3,002	2,653	2,250	1,765
Furniture	67	75	68	57	55	51
Stone, Clay, & Glass	130	155	169	171	141	122
Primary Metals	440	534	561	581	587	394
Fabricated Metals	388	443	463	438	389	335
Machinery, exc Elect	473	537	596	616	641	593
Electric & Electronic	117	174	264	360	401	418
Motor Vehicles	200	234	237	122	95	75
Transport Equip exc MV	160	214	203	203	174	155
Instruments	277	375	492	548	590	615
Misc Manufacturing	31	37	41	43	62	65
Nondurable Goods	1,729	1,717	1,822	1,747	1,734	1,742
Food Products	543	572	634	661	690	739
Textile Mill Prod	42	39	39	36	31	28
Apparel	93	82	75	66	54	44
Paper Products	645	575	595	524	491	485
Printing & Publishing	242	258	273	270	278	264
Chemicals	87	93	95	82	84	82
Petroleum & Coal	38	50	59	49	38	33
Rubber & Plastics	31	40	47	52	60	58
Leather Products	9	8	5	6	8	8
Distributive	6,918	7,473	7,727	7,565	7,373	6,941
Transportation	1,444	1,536	1,561	1,496	1,385	1,258
Communication	645	735	812	890	928	921
Wholesale Trade	2,260	2,508	2,610	2,579	2,573	2,449
Retail exc Restaurants	2,569	2,694	2,744	2,600	2,487	2,313

Appendix Table I-1, Continued

	1977	1978	1979	1980	1981	1982
Personal Services	1,774	1,911	1,927	1,878	1,795	1,667
Restaurants	671	731	752	733	721	673
Hotels	266	290	287	263	222	182
Personal Services	260	267	261	266	247	242
Private Households	59	58	54	51	50	51
Auto Repair	292	327	332	326	319	282
Misc Repair Services	105	110	117	116	108	108
Amusement & Recreation	27	33	22	21	17	19
Motion Pictures	94	95	102	102	111	110
Producer Services	5,922	6,716	7,173	7,217	7,102	6,587
Finance	580	618	648	668	706	655
Insurance	451	482	503	489	485	475
Real Estate	3,726	4,314	4,603	4,598	4,453	4,165
Business Services	524	587	640	666	649	590
Legal Services	229	261	270	283	301	295
Misc Professional Srvcs	412	454	509	513	508	407
Social Services	1,768	1,874	1,939	2,022	2,105	2,109
Health Services	1,343	1,428	1,484	1,539	1,630	1,635
Educational Services	110	115	116	126	127	126
Social Srvs & Mem Orgs	315	331	339	357	348	348
Government	3,787	3,954	4,104	4,153	4,189	4,044
Federal Civilian	799	838	853	867	858	833
Federal Military	119	135	122	123	99	106
State & Local	2,868	2,982	3,129	3,163	3,232	3,104

Appendix Table I-1, Continued

	1983	1984	1985	1986	1977-86 Growth Rate	1985-86 Growth Rate
Total	31,899	33,747	34,769	35,934	1.5%	3.4%
Extractive	1,475	1,431	1,624	1,801	5.5%	10.9%
Farm	1,095	1,062	1,247	1,392	5.9%	11.6%
Agricultural Services	323	312	318	353	7.1%	11.0%
Mining	58	57	59	57	-4.9%	-3.4%
Transformative	8,643	9,652	9,870	10,130	0.0%	2.6%
Construction	1,006	1,068	1,123	1,152	-6.4%	2.6%
Utilities	1,000	1,065	1,117	1,085	0.0%	-2.9%
Manufacturing	6,637	7,519	7,630	7,893	1.4%	3.4%
Durable Goods	4,843	5,712	5,790	6,041	1.7%	4.3%
Lumber & Wood Prod	2,044	2,252	2,147	2,173	-3.3%	1.2%
Furniture	53	61	58	58	-1.6%	0.0%
Stone, Clay, & Glass	116	121	130	137	0.6%	5.4%
Primary Metals	342	439	442	474	0.8%	7.2%
Fabricated Metals	359	407	405	387	-0.0%	-4.4%
Machinery, exc Elect	646	798	934	1,062	9.4%	13.7%
Electric & Electronic	468	642	681	698	22.0%	2.5%
Motor Vehicles	145	240	189	176	-1.4%	-6.9%
Transport Equip exc MV	128	151	156	214	3.3%	37.2%
Instruments	484	512	557	575	8.5%	3.2%
Misc Manufacturing	58	92	92	87	12.1%	-5.4%
Nondurable Goods	1,794	1,807	1,840	1,851	0.8%	0.6%
Food Products	739	713	734	715	3.1%	-2.6%
Textile Mill Prod	28	29	30	28	-4.4%	-6.7%
Apparel	43	46	39	40	-8.9%	2.6%
Paper Products	488	509	524	531	-2.1%	1.3%
Printing & Publishing	274	277	285	280	1.6%	-1.8%
Chemicals	89	88	82	85	-0.3%	3.7%
Petroleum & Coal	43	49	42	52	3.5%	23.8%
Rubber & Plastics	79	87	93	111	15.2%	19.4%
Leather Products	11	10	11	10	1.2%	-9.1%
Distributive	7,205	7,756	7,874	8,176	1.9%	3.8%
Transportation	1,327	1,474	1,459	1,503	0.4%	3.0%
Communication	968	942	882	897	3.7%	1.7%
Wholesale Trade	2,481	2,753	2,931	3,081	3.5%	5.1%
Retail exc Restaurants	2,429	2,587	2,602	2,695	0.5%	3.6%

Appendix Table I-1, Continued

	1983	1984	1985	1986	1977-86 Growth Rate	1985-86 Growth Rate
Personal Services	1,726	1,765	1,841	1,910	0.8%	3.7%
Restaurants	688	682	721	780	1.7%	8.2%
Hotels	189	184	173	169	-4.9%	-2.3%
Personal Services	240	237	261	268	0.3%	2.7%
Private Households	54	58	58	59	0.0%	1.7%
Auto Repair	308	341	353	358	2.3%	1.4%
Misc Repair Services	119	126	119	125	2.0%	5.0%
Amusement & Recreation	16	20	20	21	-2.8%	5.0%
Motion Pictures	112	117	136	130	3.7%	-4.4%
Producer Services	6,721	6,970	7,209	7,545	2.7%	4.7%
Finance	605	589	602	616	0.7%	2.3%
Insurance	455	469	495	547	2.2%	10.5%
Real Estate	4,302	4,430	4,517	4,709	2.6%	4.3%
Business Services	679	789	874	934	6.6%	6.9%
Legal Services	301	307	320	326	4.0%	1.9%
Misc Professional Srvcs	379	386	401	413	0.0%	3.0%
Social Services	2,126	2,200	2,284	2,375	3.3%	4.0%
Health Services	1,648	1,693	1,766	1,842	3.6%	4.3%
Educational Services	130	144	146	147	3.3%	0.7%
Social Srvs & Mem Orgs	348	363	372	386	2.3%	3.8%
Government	3,999	3,973	4,070	3,996	0.6%	-1.8%
Federal Civilian	851	872	882	877	1.0%	-0.6%
Federal Military	115	110	120	135	1.4%	12.5%
State & Local	3,032	2,991	3,068	2,984	0.4%	-2.7%

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table I-2
Oregon's Gross State Product, 1977-86
by Industry in Millions of Dollars

	1977	1978	1979	1980	1981
Total	21,842	25,519	28,656	30,219	31,578
Extractive	909	1,110	1,337	1,470	1,495
Farm	672	783	965	1,099	1,128
Agricultural Services	171	234	276	280	296
Mining	66	93	96	91	71
Transformative	7,326	8,501	9,384	9,228	9,024
Construction	1,244	1,482	1,688	1,599	1,290
Utilities	716	723	713	847	975
Manufacturing	5,366	6,296	6,983	6,782	6,759
Durable Goods	4,084	4,969	5,484	5,203	5,059
Lumber & Wood Prod	2,460	2,868	2,978	2,422	2,041
Furniture	46	54	53	48	50
Stone, Clay, & Glass	94	120	142	155	136
Primary Metals	319	430	510	555	607
Fabricated Metals	273	337	377	384	370
Machinery, exc Elect	357	423	502	560	624
Electric & Electronic	93	140	216	315	378
Motor Vehicles	137	165	177	97	88
Transport Equip exc MV	94	131	138	150	150
Instruments	192	277	360	477	554
Misc Manufacturing	19	24	31	40	60
Nondurable Goods	1,282	1,326	1,500	1,579	1,700
Food Products	452	494	553	608	686
Textile Mill Prod	37	35	36	34	31
Apparel	73	65	61	56	50
Paper Products	445	414	489	492	501
Printing & Publishing	162	184	209	231	256
Chemicals	64	71	76	75	84
Petroleum & Coal	19	26	31	31	30
Rubber & Plastics	24	32	41	47	55
Leather Products	6	6	4	6	8
Distributive	4,821	5,556	6,254	6,657	7,101
Transportation	883	999	1,121	1,227	1,283
Communication	508	597	667	755	856
Wholesale Trade	1,548	1,848	2,156	2,342	2,522
Retail exc Restaurants	1,882	2,112	2,310	2,333	2,440

Appendix Table I-2 Continued

	1977	1978	1979	1980	1981
Personal Services	1,117	1,305	1,421	1,515	1,553
Restaurants	390	451	497	513	548
Hotels	160	200	216	220	203
Personal Services	165	185	199	225	229
Private Households	41	43	44	45	48
Auto Repair	194	235	261	281	300
Misc Repair Services	78	91	100	121	103
Amusement & Recreation	19	25	18	18	16
Motion Pictures	70	75	86	92	106
Producer Services	3,918	4,833	5,577	6,137	6,634
Finance	371	485	560	586	690
Insurance	382	453	493	534	522
Real Estate	2,425	3,020	3,471	3,812	4,110
Business Services	339	402	480	546	586
Legal Services	135	158	190	228	255
Misc Professional Srvcs	266	315	383	431	471
Social Services	1,160	1,326	1,484	1,707	1,918
Health Services	863	991	1,118	1,286	1,475
Educational Services	79	88	95	111	119
Social Srvs & Mem Orgs	218	247	271	310	324
Government	2,592	2,887	3,198	3,505	3,852
Federal Civilian	534	598	656	719	795
Federal Military	80	96	94	102	92
State & Local	1,978	2,193	2,448	2,684	2,965

Appendix Table I-2, Continued

	1982	1983	1984	1985	1986
Total	31,148	33,526	36,882	38,922	41,278
Extractive	1,413	1,486	1,610	1,584	1,687
Farm	1,103	1,058	1,204	1,186	1,255
Agricultural Services	263	369	347	336	374
Mining	47	59	59	62	58
Transformative	8,387	9,010	10,208	10,445	10,915
Construction	1,053	1,021	1,150	1,261	1,355
Utilities	1,005	1,089	1,218	1,335	1,379
Manufacturing	6,329	6,900	7,840	7,849	8,181
Durable Goods	4,587	5,064	5,871	5,796	6,047
Lumber & Wood Prod	1,765	2,318	2,522	2,381	2,491
Furniture	51	55	64	65	69
Stone, Clay, & Glass	122	119	128	142	156
Primary Metals	394	346	459	451	471
Fabricated Metals	335	349	401	410	402
Machinery, exc Elect	593	560	594	599	605
Electric & Electronic	418	479	663	705	725
Motor Vehicles	75	147	248	200	196
Transport Equip exc MV	155	133	162	171	239
Instruments	615	498	544	585	609
Misc Manufacturing	65	60	87	87	85
Nondurable Goods	1,742	1,836	1,968	2,053	2,134
Food Products	739	771	781	815	814
Textile Mill Prod	28	29	30	32	30
Apparel	44	44	47	41	43
Paper Products	485	471	537	567	594
Printing & Publishing	264	292	319	348	360
Chemicals	82	89	91	89	92
Petroleum & Coal	33	51	66	60	76
Rubber & Plastics	58	79	87	93	116
Leather Products	8	11	10	10	10
Distributive	6,941	7,556	8,397	8,764	9,171
Transportation	1,258	1,384	1,580	1,632	1,676
Communication	921	1,010	1,036	1,022	1,086
Wholesale Trade	2,449	2,531	2,890	3,069	3,213
Retail exc Restaurants	2,313	2,631	2,891	3,041	3,196

Appendix Table I-2, Continued

	1982	1983	1984	1985	1986
Personal Services	1,667	1,680	1,814	1,951	2,081
Restaurants	673	581	602	659	717
Hotels	182	205	217	219	235
Personal Services	242	255	264	308	327
Private Households	51	54	59	59	61
Auto Repair	282	320	364	389	408
Misc Repair Services	108	131	158	140	155
Amusement & Recreation	19	17	23	24	26
Motion Pictures	110	117	127	153	152
Producer Services	6,587	7,284	7,917	8,644	9,537
Finance	655	763	713	786	849
Insurance	475	514	523	571	727
Real Estate	4,165	4,565	4,961	5,308	5,789
Business Services	590	712	890	1,059	1,171
Legal Services	295	333	389	423	462
Misc Professional Srvcs	407	397	441	497	539
Social Services	2,109	2,260	2,436	2,643	2,846
Health Services	1,635	1,754	1,870	2,040	2,204
Educational Services	126	138	164	173	184
Social Srvs & Mem Orgs	348	368	402	430	458
Government	4,044	4,248	4,498	4,893	5,042
Federal Civilian	833	889	969	1,028	1,038
Federal Military	106	120	122	140	160
State & Local	3,104	3,239	3,407	3,725	3,843

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table I-3
Gross State Product by State, 1977-86
In Millions of 1982 Constant Dollars

	1977	1978	1979	1980	1981
United States	2,913,337	3,062,866	3,137,538	3,111,206	3,166,388
New England	149,470	155,828	159,827	159,858	164,955
Connecticut	42,976	44,844	46,008	45,949	47,397
Maine	10,916	11,434	11,765	11,731	12,013
Massachusetts	71,258	73,575	75,180	75,289	77,490
New Hampshire	9,084	10,002	10,572	10,738	11,332
Rhode Island	10,323	10,610	10,734	10,518	10,848
Vermont	4,913	5,363	5,569	5,634	5,875
Mideast	573,541	587,561	591,097	580,862	592,191
Delaware	8,313	8,390	8,360	8,200	8,344
District of Columbia	22,168	22,937	22,837	22,593	22,012
Maryland	50,507	52,317	52,804	52,361	53,231
New Jersey	97,370	101,593	103,350	102,571	105,835
New York	251,092	254,194	254,314	249,770	256,199
Pennsylvania	144,091	148,130	149,431	145,367	146,570
Great Lakes	564,258	587,586	588,165	556,047	555,077
Illinois	168,627	173,767	173,817	165,722	166,029
Indiana	68,832	71,717	72,047	67,930	68,135
Michigan	129,279	135,247	132,845	121,360	118,356
Ohio	140,466	146,947	147,766	140,782	141,743
Wisconsin	57,055	59,908	61,689	60,255	60,815
Plains	215,445	225,950	232,784	227,153	233,943
Iowa	37,277	39,087	39,863	38,919	40,630
Kansas	31,032	32,232	33,680	32,844	33,707
Minnesota	51,661	54,138	56,239	55,874	56,748
Missouri	60,424	63,375	64,333	61,574	62,540
Nebraska	19,563	20,298	20,943	20,575	21,777
North Dakota	8,077	9,020	9,562	9,525	10,532
South Dakota	7,411	7,800	8,164	7,841	8,009
Southeast	568,140	604,005	623,409	627,009	645,187
Alabama	37,463	39,964	40,979	40,380	41,105
Arkansas	21,410	23,063	23,501	23,210	24,134
Florida	95,449	103,064	109,121	113,857	118,145
Georgia	58,085	61,607	63,825	64,216	66,352
Kentucky	41,137	43,098	44,188	42,637	43,595
Louisiana	68,209	72,221	73,681	75,312	77,342
Mississippi	23,628	24,880	25,611	25,082	26,017
No Carolina	62,681	66,409	68,039	68,065	70,395
So Carolina	27,791	29,587	30,989	31,303	32,533
Tennessee	47,941	51,630	52,759	51,810	52,804
Virginia	63,151	66,445	68,123	68,787	70,711
West Virginia	21,193	22,036	22,592	22,349	22,053

Appendix Table I-3, Continued

	1977	1978	1979	1980	1981
Southwest	303,010	323,067	336,980	343,674	357,436
Arizona	28,110	31,062	33,943	34,708	35,244
New Mexico	16,932	18,122	19,078	19,664	20,265
Oklahoma	39,235	41,564	43,535	44,944	47,236
Texas	218,733	232,319	240,424	244,359	254,691
Rocky Mountain	82,174	89,580	94,071	96,670	98,858
Colorado	37,429	40,522	42,917	43,888	44,695
Idaho	9,967	10,828	10,924	11,002	10,959
Montana	9,675	10,580	10,952	11,114	11,394
Utah	15,324	16,611	17,291	17,639	18,093
Wyoming	9,779	11,038	11,988	13,027	13,717
Far West	431,622	462,504	483,741	488,770	485,393
California	338,040	359,603	374,928	380,221	378,436
Nevada	10,673	12,233	13,343	13,991	14,365
Oregon	31,397	33,793	35,296	34,762	33,614
Washington	51,511	56,875	60,175	59,796	58,977
Alaska	12,221	12,789	12,774	15,764	18,953
Hawaii	13,455	13,996	14,690	15,399	14,395

Appendix Table I-3, Continued

	1982	1983	1984	1985	1986
United States	3,104,127	3,205,302	3,433,083	3,568,628	3,681,144
New England	164,575	175,922	192,233	204,453	217,026
Connecticut	47,241	50,594	55,117	58,263	61,750
Maine	12,099	12,813	13,652	14,238	15,056
Massachusetts	77,166	82,489	90,684	96,698	102,279
New Hampshire	11,606	12,743	14,100	15,541	17,073
Rhode Island	10,592	11,022	12,011	12,572	13,283
Vermont	5,871	6,261	6,669	7,142	7,585
Mideast	586,093	611,237	648,564	673,663	702,765
Delaware	8,435	8,883	9,347	9,699	10,072
District of Columbia	21,402	21,785	22,419	23,135	23,682
Maryland	52,583	55,323	58,925	62,179	65,408
New Jersey	106,705	113,408	121,388	126,460	133,468
New York	255,686	267,916	285,080	296,381	309,273
Pennsylvania	141,282	143,923	151,405	155,809	160,862
Great Lakes	526,210	538,790	581,904	603,461	622,918
Illinois	159,778	160,856	173,602	178,493	183,849
Indiana	64,042	65,211	70,975	73,392	75,924
Michigan	108,627	114,259	123,886	131,417	136,433
Ohio	134,204	137,411	147,979	152,689	156,541
Wisconsin	59,558	61,053	65,461	67,469	70,171
Plains	227,437	228,405	245,913	253,800	261,193
Iowa	37,634	35,937	38,704	39,344	40,425
Kansas	33,287	33,638	35,582	36,560	37,783
Minnesota	55,919	57,167	62,730	65,463	68,117
Missouri	61,226	63,655	68,490	70,830	72,629
Nebraska	21,244	20,647	22,164	23,300	23,673
North Dakota	10,293	9,700	10,043	9,884	9,806
South Dakota	7,835	7,660	8,200	8,418	8,760
Southeast	637,204	662,107	712,197	737,914	762,321
Alabama	40,328	42,245	45,118	46,849	48,409
Arkansas	23,462	24,415	26,512	27,159	28,168
Florida	118,301	126,322	136,572	145,171	152,269
Georgia	66,766	71,485	78,797	83,461	88,827
Kentucky	42,286	42,668	45,998	46,753	47,502
Louisiana	75,743	72,535	75,349	73,777	68,508
Mississippi	25,537	25,570	27,342	27,778	27,987
No Carolina	69,128	73,553	80,020	83,170	87,371
So Carolina	31,940	33,914	36,736	37,687	39,281
Tennessee	51,967	54,217	58,810	61,337	64,124
Virginia	70,375	74,360	79,329	83,143	88,171
West Virginia	21,370	20,822	21,615	21,629	21,705

Appendix Table I-3, Continued

	1982	1983	1984	1985	1986
Southwest	356,834	359,916	382,525	395,657	389,454
Arizona	33,603	35,963	40,010	43,350	46,058
New Mexico	20,023	20,283	21,331	21,741	21,154
Oklahoma	48,700	46,425	47,499	47,178	45,928
Texas	254,508	257,245	273,685	283,388	276,313
Rocky Mountain	97,639	98,805	103,662	105,899	106,279
Colorado	45,252	46,523	49,332	50,820	51,781
Idaho	10,432	10,879	11,262	11,815	11,672
Montana	11,007	10,911	10,817	10,323	10,763
Utah	17,892	18,570	20,177	20,920	21,193
Wyoming	13,056	11,922	12,073	12,022	10,870
Far West	474,230	495,358	530,569	557,990	583,734
California	372,541	390,528	420,525	444,082	464,550
Nevada	13,796	14,103	14,790	15,474	16,092
Oregon	31,148	31,899	33,747	34,769	35,934
Washington	56,745	58,828	61,507	63,664	67,158
Alaska	19,648	20,053	20,509	20,281	19,325
Hawaii	14,259	14,710	15,006	15,510	16,130

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table I-4
Gross State Product by State, 1977-86
In Millions of Dollars

	1977	1978	1979	1980	1981
United States	1,957,586	2,213,303	2,458,060	2,670,299	2,986,855
New England	102,828	114,712	126,634	138,413	155,153
Connecticut	29,547	32,995	36,404	39,752	44,612
Maine	7,515	8,457	9,432	10,200	11,325
Massachusetts	49,020	54,087	59,366	65,057	72,780
New Hampshire	6,291	7,410	8,442	9,326	10,672
Rhode Island	7,057	7,771	8,521	9,184	10,236
Vermont	3,399	3,992	4,468	4,894	5,527
Mideast	390,885	429,335	464,874	499,194	555,801
Delaware	5,609	6,077	6,539	7,047	7,879
District of Columbia	14,975	16,688	17,808	19,029	20,354
Maryland	34,361	38,199	41,643	44,912	49,854
New Jersey	66,915	74,461	81,465	88,516	99,514
New York	170,357	185,092	199,090	214,143	240,237
Pennsylvania	98,668	108,819	118,328	125,547	137,964
Great Lakes	388,106	432,983	467,946	480,518	523,757
Illinois	115,465	127,867	137,989	143,110	156,693
Indiana	47,726	53,386	57,914	59,050	64,456
Michigan	88,484	98,620	104,512	103,841	111,249
Ohio	96,613	108,193	117,472	121,642	133,627
Wisconsin	39,818	44,917	50,059	52,876	57,732
Plains	147,583	167,717	187,820	197,637	222,019
Iowa	26,233	29,995	33,059	34,442	38,917
Kansas	20,341	22,936	26,433	28,066	31,831
Minnesota	35,595	40,285	45,401	48,846	53,766
Missouri	41,328	46,642	51,227	53,142	58,868
Nebraska	13,619	15,410	17,259	18,073	20,820
North Dakota	5,342	6,535	7,604	8,146	10,174
South Dakota	5,125	5,915	6,836	6,922	7,644
Southeast	381,856	436,904	488,375	537,889	608,107
Alabama	25,768	29,607	32,769	34,969	38,829
Arkansas	14,665	17,154	18,911	20,123	22,885
Florida	64,830	75,367	86,060	97,830	110,787
Georgia	40,354	45,868	51,038	55,503	62,481
Kentucky	28,434	32,028	35,234	36,828	40,947
Louisiana	38,003	43,896	51,178	62,166	74,505
Mississippi	15,786	17,959	20,178	21,470	24,545
No Carolina	43,754	49,737	54,532	58,876	65,940
So Carolina	19,709	22,391	25,102	27,275	30,788
Tennessee	33,196	38,289	42,235	45,018	49,881
Virginia	42,880	48,434	53,415	58,634	65,816
West Virginia	14,477	16,172	17,722	19,197	20,702

Appendix Table I-4, Continued

	1977	1978	1979	1980	1981
Southwest	184,656	213,676	248,640	289,160	341,229
Arizona	18,996	22,648	26,888	29,931	33,066
New Mexico	9,982	11,690	13,816	16,442	19,399
Oklahoma	23,587	27,240	32,067	37,739	45,225
Texas	132,091	152,098	175,869	205,047	243,539
Rocky Mountain	53,543	63,370	72,899	82,837	93,558
Colorado	24,772	28,941	33,435	37,620	42,099
Idaho	6,914	8,202	8,957	9,670	10,384
Montana	6,317	7,576	8,576	9,525	10,831
Utah	10,122	11,861	13,498	15,121	17,007
Wyoming	5,417	6,790	8,434	10,900	13,238
Far West	291,722	336,489	380,514	418,715	455,110
California	227,590	260,296	293,600	325,171	354,905
Nevada	7,118	8,805	10,394	11,970	13,387
Oregon	21,842	25,519	28,656	30,219	31,578
Washington	35,172	41,869	47,865	51,354	55,240
Alaska	7,370	7,997	8,929	12,860	18,723
Hawaii	9,037	10,119	11,431	13,076	13,398

Appendix Table I-4, Continued

	1982	1983	1984	1985	1986
United States	3,104,127	3,339,980	3,707,011	3,963,347	4,191,705
New England	164,575	183,072	206,107	225,201	245,850
Connecticut	47,241	52,777	59,363	64,696	70,639
Maine	12,099	13,375	14,782	15,896	17,326
Massachusetts	77,166	85,736	96,980	106,148	115,526
New Hampshire	11,606	13,137	14,846	16,585	18,518
Rhode Island	10,592	11,528	12,921	13,961	15,205
Vermont	5,871	6,519	7,215	7,915	8,636
Mideast	586,093	641,302	706,636	760,094	818,061
Delaware	8,435	9,275	10,186	10,966	11,706
District of Columbia	21,402	22,959	25,100	27,185	28,791
Maryland	52,583	57,888	64,465	70,580	76,504
New Jersey	106,705	118,357	131,776	142,302	154,765
New York	255,686	282,764	311,727	336,071	362,736
Pennsylvania	141,282	150,058	163,383	172,990	183,559
Great Lakes	526,210	559,774	624,118	662,480	700,852
Illinois	159,778	168,074	187,484	198,138	209,666
Indiana	64,042	67,677	76,086	80,262	84,922
Michigan	108,627	118,373	132,369	143,719	153,240
Ohio	134,204	142,682	158,543	167,645	176,102
Wisconsin	59,558	62,969	69,636	72,716	76,922
Plains	227,437	237,702	265,745	278,528	292,523
Iowa	37,634	37,157	41,407	42,100	43,836
Kansas	33,287	34,966	38,495	40,364	42,472
Minnesota	55,919	59,371	67,250	71,183	75,626
Missouri	61,226	66,640	74,493	79,220	83,534
Nebraska	21,244	21,565	24,268	25,639	26,521
North Dakota	10,293	10,000	10,808	10,725	10,733
South Dakota	7,835	8,003	9,023	9,297	9,802
Southeast	637,204	691,312	772,398	824,201	872,948
Alabama	40,328	43,918	48,710	51,919	55,007
Arkansas	23,462	25,394	28,716	29,926	31,633
Florida	118,301	132,590	149,554	164,340	177,729
Georgia	66,766	74,966	86,213	94,121	102,922
Kentucky	42,286	44,565	49,512	51,234	53,135
Louisiana	75,743	73,930	79,034	79,719	74,426
Mississippi	25,537	26,610	29,637	30,819	31,830
No Carolina	69,128	77,669	87,748	93,821	100,961
So Carolina	31,940	35,224	39,581	41,832	44,727
Tennessee	51,967	56,319	63,207	67,560	72,328
Virginia	70,375	78,506	87,599	95,369	104,155
West Virginia	21,370	21,619	22,885	23,541	24,096

Appendix Table I-4, Continued

	1982	1983	1984	1985	1986
Southwest	356,834	370,289	405,423	430,934	430,180
Arizona	33,603	37,631	43,442	48,589	53,253
New Mexico	20,023	20,910	22,665	23,887	23,603
Oklahoma	48,700	47,592	50,077	50,842	49,814
Texas	254,508	264,156	289,239	307,615	303,510
Rocky Mountain	97,639	102,720	111,605	117,232	120,192
Colorado	45,252	48,462	53,373	56,713	59,177
Idaho	10,432	11,346	12,299	13,027	13,170
Montana	11,007	11,381	11,726	11,543	12,163
Utah	17,892	19,381	21,739	23,172	24,008
Wyoming	13,056	12,150	12,468	12,777	11,673
Far West	474,230	518,193	577,453	625,446	672,204
California	372,541	408,216	456,874	496,850	533,816
Nevada	13,796	14,890	16,350	17,918	19,426
Oregon	31,148	33,526	36,882	38,922	41,278
Washington	56,745	61,561	67,347	71,756	77,683
Alaska	19,648	20,084	20,802	21,237	19,575
Hawaii	14,259	15,533	16,724	17,994	19,320

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table II-1
Oregon's 1987 Population Distribution by Age and Sex

Age	Females	Males	Total
0- 4	94,510	98,406	192,916
5- 9	98,112	102,835	200,947
10-14	86,170	90,949	177,119
15-19	97,172	101,347	198,519
20-24	106,582	111,244	217,826
25-29	108,233	106,112	214,345
30-34	116,170	114,841	231,011
35-39	112,607	113,918	226,525
40-44	92,431	93,710	186,141
45-49	69,843	70,370	140,213
50-54	57,466	56,412	113,878
55-59	57,886	53,330	111,216
60-64	60,826	53,379	114,205
65-69	63,181	53,710	116,891
70-74	52,403	42,028	94,431
75+	96,340	57,477	153,817
Total	1,369,932	1,320,068	2,690,000

Source: Oregon Center for Population Research and Census.

Appendix Table II-2
U.S. Population Density per Sq Mile, 1986

State	Sq. Miles	Population	People per Sq. Mile	Rank
U.S.	3,539,341	226,549,010	64	
ALABAMA	50,766	3,893,978	77	26
ALASKA	570,833	401,851	1	50
ARIZONA	113,510	2,718,425	24	40
ARKANSAS	53,187	2,286,419	43	35
CALIFORNIA	156,297	23,667,837	151	14
COLORADO	103,598	2,889,735	28	38
CONNECTICUT	4,872	3,107,576	638	5
DELAWARE	1,054	947,154	899	2
FLORIDA	54,157	9,746,421	180	11
GEORGIA	58,060	5,463,087	94	22
HAWAII	6,427	964,961	150	15
IDAHO	82,413	944,038	11	43
ILLINOIS	55,646	11,427,414	205	10
INDIANA	35,936	5,490,260	153	13
IOWA	55,965	2,913,808	52	32
KANSAS	81,783	2,364,236	29	37
KENTUCKY	39,674	3,660,257	92	23
LOUISIANA	44,520	4,206,098	94	21
MAINE	30,995	1,125,030	36	36
MARYLAND	9,838	4,216,941	429	6
MASSACHUSETTS	7,826	5,737,081	733	4
MICHIGAN	56,959	9,262,070	163	12
MINNESOTA	79,548	4,075,970	51	33
MISSISSIPPI	47,234	2,520,631	53	31
MISSOURI	68,945	4,916,759	71	27
MONTANA	145,388	786,690	5	48
NEBRASKA	76,639	1,569,825	20	41
NEVADA	109,895	800,493	7	47
NEW HAMPSHIRE	8,992	920,610	102	20
NEW JERSEY	7,468	7,365,011	986	1
NEW MEXICO	121,336	1,303,445	11	44
NEW YORK	47,379	17,558,072	371	7
NORTH CAROLINA	48,843	5,881,385	120	17
NORTH DAKOTA	69,299	652,717	9	45
OHIO	41,004	10,797,624	263	9
OKLAHOMA	68,656	3,025,495	44	34
OREGON	**96,187**	**2,633,149**	**27**	**39**
PENNSYLVANIA	44,892	11,864,751	264	8
RHODE ISLAND	1,054	947,154	899	3
SOUTH CAROLINA	30,207	3,122,814	103	19

Appendix Table II-2 Continued
U.S. Population Density per Sq Mile, 1986

State	Sq. Miles	Population	People per Sq. Mile	Rank
SOUTH DAKOTA	75,956	690,768	9	46
TENNESSEE	41,154	4,591,120	112	18
TEXAS	262,015	14,227,574	54	30
UTAH	82,076	1,461,037	18	42
VERMONT	9,273	511,456	55	29
VIRGINIA	39,700	5,346,797	135	16
WASHINGTON	66,512	4,132,204	62	28
WEST VIRGINIA	24,124	1,950,258	81	25
WISCONSIN	54,424	4,705,642	86	24
WYOMING	96,988	469,557	5	49

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table III-1
Oregon Employment by Industry, 1977-87

	1977	1978	1979	1980	1981	1982
Total Employment	1,196,167	1,275,925	1,332,127	1,332,837	1,295,491	1,247,214
Wage & Salary	1,008,803	1,078,517	1,120,077	1,109,432	1,072,153	1,016,702
Proprietors	187,364	197,408	212,050	223,405	223,338	230,512
Farm	30,084	31,946	35,093	34,840	36,212	36,673
Nonfarm	157,280	165,462	176,957	188,565	187,126	193,839
Nonfarm	1,136,467	1,215,011	1,272,949	1,271,420	1,235,131	1,187,044
Private Nonfarm	934,845	1,007,489	1,060,345	1,056,406	1,030,377	987,124
Government	201,622	207,522	212,604	215,014	204,754	199,920
Employment by Industry:						
Extractive	76,875	81,074	80,177	83,303	82,296	82,373
Farm	59,700	60,914	59,178	61,417	60,360	60,170
Ag Serv, Forestry, Fisheries, & Other	15,019	17,517	18,119	18,904	19,022	19,468
Mining	2,156	2,643	2,880	2,982	2,914	2,735
Transformative	283,081	305,480	321,323	302,407	279,990	252,729
Construction	61,051	69,211	74,590	67,632	57,645	48,298
Utilities	7,892	8,076	8,534	9,210	9,541	9,378
Manufacturing	214,138	228,193	238,199	225,565	212,804	195,053
Nondurable Goods	55,384	55,929	57,903	56,942	55,901	54,358
Food Products	24,088	24,418	25,324	24,512	23,908	23,833
Textile Mill Prod	2,169	2,289	2,214	2,164	1,919	1,924
Apparel	3,627	3,688	3,788	3,371	3,082	2,938
Paper Products	10,369	9,354	9,751	10,421	10,352	9,649
Printing & Pub	9,844	10,338	10,701	10,706	10,959	10,739
Chemicals	2,310	2,437	2,451	2,368	2,373	2,230
Petro & Coal Prod	502	622	692	646	528	500
Rubber & Misc Plastic	2,114	2,433	2,653	2,468	2,472	2,285
Leather	361	350	329	286	308	260
Durable Goods	158,754	172,264	180,296	168,623	156,903	140,695
Lumber & Wood Prod	83,400	85,813	86,669	75,227	67,882	59,138
Furniture & Fix	3,317	3,586	3,186	2,800	2,882	2,790
Primary Metals	9,678	10,470	11,149	11,055	10,275	8,327
Fabricated Metals	11,805	13,519	13,790	12,806	11,285	9,903
Machinery	14,050	15,742	17,991	18,386	18,463	17,016
Elect & Electronic	4,714	6,137	8,700	9,884	10,261	10,246
Transport Equip	6,147	7,234	6,776	6,244	5,427	4,863
Motor Vehicles	4,070	4,910	5,531	4,208	3,585	2,945
Stone, Clay, & Glass	4,272	4,555	4,711	5,099	4,599	4,247
Instruments	14,142	17,058	18,193	19,081	18,120	16,911
Misc Mfg	3,159	3,240	3,600	3,833	4,124	4,309

Appendix Table III-1 Continued
Oregon Employment by Industry, 1977-87

	1977	1978	1979	1980	1981	1982
Distributive Services	254,633	271,628	283,152	284,546	280,543	267,747
Transportation	38,198	40,025	41,847	41,703	40,183	37,901
Communication	13,401	14,637	15,917	16,432	16,371	16,217
Wholesale Trade	61,783	67,423	70,715	71,274	70,474	65,819
Retail Trade except Restaurants	141,251	149,543	154,673	155,137	153,515	147,810
Bldg Mat'l & Farm Eq	8,997	9,969	10,527	10,012	9,357	8,330
Gen'l Merchandise	27,262	28,882	29,072	28,949	25,873	24,665
Food Stores	24,047	24,923	26,373	27,520	30,153	29,983
Auto Dlrs & Srvc Stas	29,262	30,838	30,068	28,032	26,870	24,960
Apparel Stores	8,825	9,628	10,007	10,078	10,509	9,888
Home Furnishings	9,171	10,160	10,334	9,799	9,210	8,408
Misc Retail Stores	33,687	35,143	38,292	40,747	41,543	41,576
Personal Services	141,377	153,055	158,370	158,943	158,836	154,671
Restaurants	61,021	68,736	72,709	72,416	72,655	69,351
Hotels	15,366	17,179	17,759	17,481	17,042	16,281
Personal Services	18,989	20,041	20,639	21,337	21,963	21,878
Private Households	16,082	15,776	14,565	13,275	13,342	13,424
Auto Repair	10,223	10,931	11,287	11,487	11,439	11,164
Misc Repair Srvs	7,395	7,706	7,997	8,364	7,813	7,427
Amusement & Recreation	10,240	10,504	11,237	12,213	12,451	12,961
Motion Pictures	2,061	2,182	2,177	2,370	2,131	2,185
Producer Services	139,160	152,351	166,478	173,006	170,793	169,986
Finance	25,178	26,913	29,276	30,851	31,276	30,237
Insurance	19,732	21,003	22,488	23,173	23,220	22,820
Real Estate	37,176	41,535	45,720	46,973	45,392	43,443
Business Services	29,982	32,683	36,663	38,164	38,104	41,227
Legal Services	6,964	7,388	8,005	8,676	9,572	10,304
Miscellaneous Services	20,128	22,829	24,326	25,169	23,229	21,955
Social Services	99,419	104,815	110,023	115,618	118,279	119,788
Health Services	60,562	63,902	67,358	70,491	73,352	74,477
Educational Services	9,592	10,016	10,949	12,342	12,734	13,877
Social Services	10,729	11,906	12,454	13,206	12,763	12,290
Museums, Zoos, etc	358	416	484	442	439	433
Membership Orgs	18,178	18,575	18,778	19,137	18,991	18,711
Government	201,622	207,522	212,604	215,014	204,754	199,920
Federal, civilian	27,856	29,273	29,958	30,527	30,187	29,598
Military	13,624	14,362	13,914	13,929	10,010	10,649
State & Local	160,142	163,887	168,732	170,558	164,557	159,673

Appendix Table III-1 Continued
Oregon Employment by Industry, 1977-87

	1982	1983	1984	1985	1986	1987p
Total Employment	1,247,214	1,274,028	1,327,983	1,366,598	1,411,358	1,450,068
Wage & Salary	1,016,702	1,023,597	1,067,347	1,092,391	1,120,758	1,155,068
Proprietors	230,512	250,431	260,636	274,207	290,600	295,000
Farm	36,673	39,585	38,581	38,509	38,503	38,490
Nonfarm	193,839	210,846	222,055	235,698	252,097	256,510
Nonfarm	1,187,044	1,211,189	1,266,444	1,306,301	1,350,872	1,389,568
Private Nonfarm	987,124	1,011,983	1,065,894	1,098,187	1,139,366	1,173,519
Government	199,920	199,206	200,550	208,114	211,506	216,049
Employment by Industry:						
Extractive	82,373	86,620	86,550	85,170	86,974	87,155
Farm	60,170	62,839	61,539	60,297	60,486	60,500
Ag Serv, Forestry, Fisheries, & Other	19,468	21,055	22,387	22,265	23,833	24,000
Mining	2,735	2,726	2,624	2,608	2,655	2,655
Transformative	252,729	256,903	274,537	277,585	280,015	287,365
Construction	48,298	48,975	53,435	56,962	60,208	60,559
Utilities	9,378	9,245	9,295	9,427	9,510	9,619
Manufacturing	195,053	198,683	211,807	211,196	210,297	217,187
Nondurable Goods	54,358	55,101	56,185	56,085	56,222	58,063
Food Products	23,833	24,147	24,176	23,755	23,529	23,628
Textile Mill Prods	1,924	1,759	1,791	1,737	1,599	1,799
Apparel	2,938	2,955	3,284	2,849	2,795	3,038
Paper Products	9,649	9,290	9,016	9,231	9,103	9,203
Printing & Pub	10,739	11,047	11,773	12,224	12,511	13,241
Chemicals	2,230	2,373	2,340	2,403	2,411	2,532
Petroleum & Coal	500	511	495	378	461	461
Rubber & Plastics	2,285	2,535	2,832	3,047	3,353	3,747
Leather	260	484	478	461	460	575
Durable Goods	140,695	143,582	155,622	155,111	154,075	159,124
Lumber & Wood Prod	59,138	66,416	70,810	68,234	69,459	72,470
Furniture	2,730	2,924	3,186	3,289	3,461	3,205
Primary Metals	8,327	7,759	9,241	8,925	8,826	9,093
Fabricated Metals	9,903	9,627	10,651	11,271	10,870	11,755
Machinery	17,016	15,571	16,084	16,105	15,407	14,826
Elect & Electronic	10,246	10,815	13,993	14,190	13,247	13,689
Transportation Equip	4,863	3,813	4,243	5,134	6,081	7,160
Motor Vehicles	2,945	3,357	4,297	4,238	4,119	4,050
Stone, Clay, & Glass	4,247	4,158	4,043	4,319	4,604	5,060
Instruments	16,911	14,739	14,361	14,722	13,257	12,245
Misc Mfg	4,309	4,403	4,713	4,684	4,744	5,879

Appendix Table III-1 Concluded
Oregon Employment by Industry, 1977-87

	1982	1983	1984	1985	1986	1987p
Distributive Services	267,747	269,963	268,218	270,814	277,429	287,000
Transportation	37,901	38,782	29,732	30,828	31,073	32,205
Communication	16,217	15,308	14,560	13,786	13,531	13,214
Wholesale Trade	65,819	66,030	67,972	69,431	71,272	73,182
Retail Trade except Restaurants	147,810	149,843	155,954	156,769	161,553	168,400
Bldg Mat'l & Farm Eq	8,330	8,503	8,475	8,335	8,386	
Gen'l Merchandise	24,665	24,909	26,403	26,217	27,146	
Food Stores	29,983	30,438	31,260	32,748	35,108	
Auto Dlrs & Srvc Stas	24,960	25,797	27,132	27,765	28,708	
Apparel Stores	9,888	9,900	9,737	9,391	9,717	
Home Furnishings	8,408	9,055	9,772	9,894	10,111	
Misc Retail Stores	41,576	41,241	43,175	42,419	42,377	
Personal Services	154,671	158,459	167,399	176,521	184,512	195,000
Restaurants	69,351	70,750	73,689	76,809	80,140	83,067
Hotels	16,281	15,770	16,388	17,058	17,357	
Personal Services	21,878	23,432	24,488	28,367	30,625	
Private Households	13,424	13,230	13,176	12,856	12,575	
Auto Repair	11,164	12,283	13,812	14,688	15,597	
Misc Repair Srvs	7,427	7,820	9,078	8,902	9,350	
Amusement & Recreation	12,961	12,876	14,014	15,010	15,682	
Motion Pictures	2,185	2,298	2,754	2,831	3,186	
Producer Services	169,986	179,432	190,661	203,204	218,825	230,000
Finance	30,237	29,907	30,472	30,254	30,623	
Insurance	22,820	22,322	22,618	22,830	23,798	
Real Estate	43,443	45,779	47,371	51,981	56,158	
Business Services	41,227	46,680	53,815	60,794	68,978	
Legal Services	10,304	10,760	11,267	11,737	12,557	
Misc Services	21,955	23,984	25,118	25,608	26,711	
Social Services	119,788	123,445	127,598	132,469	138,919	147,500
Health Services	74,477	76,172	77,296	80,543	84,468	
Educational Services	13,877	15,486	17,087	17,679	18,033	
Social Services	12,290	13,036	14,386	15,467	17,093	
Museums, Zoos, etc	433	460	475	477	536	
Membership Orgs	18,711	18,291	18,354	18,303	18,789	
Government	199,920	199,206	200,550	208,114	211,506	216,049
Federal, civilian	29,598	29,645	29,361	29,731	29,428	
Military	10,649	11,677	11,413	12,317	13,329	
State & Local	159,673	157,884	159,776	166,066	168,749	172,508

p=preliminary
Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table III-2
Fastest Growing Industries in the U.S.

Industry:	1977 Employment	1986 Employment	Change 1977-86	Percent Change
Business Services	2,910,800	7,089,000	4,178,200	143.5%
Legal Services	620,100	1,161,000	540,900	87.2%
Museums, Zoos, etc	26,000	46,000	20,000	76.9%
Miscellaneous Services	1,415,900	2,469,000	1,053,100	74.4%
Auto Repair	739,700	1,256,400	516,700	69.9%
Social Services	835,000	1,418,000	583,000	69.8%
Agric Serv, Forestry, Fis	702,900	1,167,000	464,100	66.0%
Personal Services	1,602,400	2,635,700	1,033,300	64.5%
Finance, Ins, & R.E.	6,093,300	9,628,100	3,534,800	58.0%
Health Services	4,841,200	7,389,500	2,548,300	52.6%
Amusement & Recreation	927,600	1,371,000	443,400	47.8%
Hotels, etc	1,080,800	1,565,500	484,700	44.8%
Motion Pictures	224,700	318,900	94,200	41.9%
Construction	4,774,000	6,659,700	1,885,700	39.5%
Educational Services	1,331,700	1,770,200	438,500	32.9%
Printing & Publishing	1,170200	1,548,200	378,000	32.3%
Retail Trade	15,749,700	20,732,000	4,982,300	31.6%
Utilities	760,000	969,800	209,800	27.6%
Transportation Equip	912,900	1,154,700	241,800	26.5%
Mining	870,200	1,098,800	228,600	26.3%
Miscellaneous Repair Srvs	521,400	643,200	121,800	23.4%
Wholesale Trade	5,003,500	6,169,600	1,166,100	23.3%
Instruments	575,500	705,600	130,100	22.6%
Rubber & Misc Plastics	649,800	792,000	142,200	21.9%
Transportation	3,052,700	3,661,100	608,400	19.9%
Electric & Electronic	1,786,100	2,134,100	348,000	19.5%

Appendix Table IV-1
Oregon Personal Income by Industry, 1977-87
In Thousands of Dollars

	1978	1979	1980	1981	1982
Total Personal Income	$20,818,667	$23,653,023	$26,055,397	$27,884,363	$28,275,351
Per Capita Income (Dollars)	8,296	9,174	9,864	10,446	10,594
Earnings by Place of Work	16,127,100	18,238,224	19,536,277	20,017,252	19,734,840
Less: FICA Tax	821,874	928,315	1,016,226	1,179,815	1,258,396
Plus: Adj for Residence	(153,723)	(229,395)	(282,033)	(241,733)	(204,659)
Earnings by Residence	15,151,503	17,080,514	18,238,018	18,595,704	18,271,785
Dividends, Int & Rent	2,864,507	3,429,218	4,077,793	4,991,886	5,174,144
Transfer Payments	2,802,657	3,143,291	3,739,586	4,296,773	4,829,422
Wages and Salaries	12,622,914	14,337,210	15,379,300	16,058,903	15,996,076
Other Labor Income	1,182,483	1,358,184	1,518,046	1,526,973	1,581,333
Proprietors' Income	2,321,703	2,542,830	2,638,931	2,431,376	2,157,431
Farm	254,320	321,149	396,704	358,114	264,479
Nonfarm	2,067,383	2,221,681	2,242,227	2,073,262	1,892,952
Distribution of Earnings by Place of Work:					
Extractive	651,772	756,984	859,102	807,443	691,700
Farm	416,510	498,008	582,489	537,834	463,474
Agricultural Services	171,123	186,614	175,576	163,084	138,775
Mining	64,139	72,362	101,037	106,525	89,451
Transformative	5,440,624	6,216,552	6,421,670	6,231,596	5,828,757
Construction	1,274,832	1,493,009	1,459,179	1,211,041	1,019,096
Utilities	206,947	213,389	251,640	280,000	279,208
Manufacturing	3,958,845	4,510,154	4,710,851	4,740,555	4,530,453
Nondurable Goods	834,101	959,646	1,045,826	1,125,370	1,146,546
Food Products	340,021	380,181	407,784	437,006	455,875
Textile Mill Products	24,603	26,825	27,155	26,950	27,394
Apparel	34,105	36,160	36,267	34,951	35,821
Paper Products	207,121	254,390	287,866	313,873	313,310
Printing & Publishing	132,732	155,688	174,954	192,696	197,468
Chemicals	44,082	47,966	50,502	53,697	53,544
Petroleum & Coal Prod	13,399	16,336	16,092	15,162	0
Rubber & Plastics	32,912	38,710	41,101	45,348	43,422
Leather Products	5,126	3,390	4,105	5,687	0
Durable Goods	3,124,744	3,550,508	3,665,025	3,615,185	3,383,907
Lumber & Wood Prod	1,624,549	1,776,263	1,673,864	1,575,917	1,396,538
Furniture & Fixtures	43,417	43,369	39,499	40,741	0
Primary Metals	232,939	274,620	309,272	314,120	266,830
Fabricated Metals	229,623	255,380	266,822	253,781	235,142
Machinery, exc Elect	291,293	357,973	404,559	443,494	436,991
Electric & Electronic	83,351	131,620	178,134	199,266	220,923
Transp Equip exc M V	140,508	146,499	159,323	160,029	0
Motor Vehicles & Equip	100,970	125,238	117,588	106,396	93,290
Stone, Clay, & Glass	79,639	92,760	104,864	95,747	84,659
Instruments	269,106	315,384	375,276	379,135	409,584
Misc Mfg	29,349	31,402	35,824	46,559	45,605

Appendix Table IV-1, Continued
Oregon Personal Income by Industry, 1977-87
In Thousands of Dollars

	1978	1979	1980	1981	1982
Distributive	3,676,969	4,143,325	4,436,915	4,568,540	4,527,128
Transportation	739,729	837,612	907,234	925,025	928,644
Communication	277,811	326,926	369,015	409,525	432,702
Wholesale Trade	1,148,440	1,310,207	1,437,805	1,473,200	1,436,347
Retail Trade	1,510,989	1,668,580	1,722,861	1,760,790	1,729,435
Personal services	1,035,565	1,125,321	1,223,566	1,247,260	1,240,919
Restaurants	409,977	457,004	486,100	510,323	503,057
Hotels & Other Lodging	124,329	133,035	139,423	124,920	120,449
Personal Services	154,886	165,921	190,264	192,783	203,205
Private Households	42,177	43,614	44,443	47,345	50,484
Auto Repair	160,179	172,997	188,234	207,938	192,038
Misc Repair	75,577	83,277	101,866	83,729	88,845
Amusement & Recreation	50,481	58,297	60,627	70,317	71,702
Motion Pictures	17,959	11,176	12,609	9,905	11,139
Producer Services	1,615,403	1,899,964	2,051,394	2,176,986	2,128,846
Finance	322,642	377,815	437,785	532,414	522,078
Insurance	304,364	345,274	377,727	404,670	418,102
Real Estate	245,905	270,273	193,776	109,929	68,291
Business Services	316,147	384,072	442,446	473,750	485,553
Legal Services	149,846	179,649	215,395	238,273	273,747
Misc Services	276,499	342,881	384,265	417,950	361,075
Social Services	1,198,649	1,340,672	1,538,400	1,714,320	1,887,463
Health Services	888,233	999,293	1,147,492	1,303,670	1,442,682
Educational Services	75,428	84,869	98,274	105,341	117,820
Social Services	78,843	88,548	100,916	105,892	113,765
Museums, Zoos, etc	3,346	3,888	4,019	4,427	4,634
Membership Orgs	152,799	164,074	187,699	194,990	208,562
Government	2,508,118	2,755,406	3,005,230	3,271,107	3,430,027
Federal, Civilian	513,254	555,211	608,999	663,570	691,519
Military	67,194	63,994	68,399	59,481	73,231
State and Local	1,927,670	2,136,201	2,327,832	2,548,056	2,665,277

Appendix Table IV-1, Continued
Oregon Personal Income by Industry, 1977-87
In Thousands of Dollars

	1982	1984	1985	1986	1987
Total Personal Income	$29,983,644	$32,245,893	$34,074,918	$35,955,251	$37,900,000
Per Capita Income (Dollars)	11,271	12,048	12,687	13,328	13,887
Earnings by Place of Work	20,816,712	22,639,795	24,023,883	25,435,323	
Less: FICA Tax	1,312,755	1,433,693	1,576,601	1,679,273	
Plus: Adj for Residence	(218,118)	(243,484)	(243,932)	(247,860)	
Earnings by Residence	19,285,839	20,962,618	22,203,350	23,508,190	
Dividends, Int, & Rent	5,497,075	5,978,170	6,164,069	6,514,481	
Transfer Payments	5,200,730	5,305,105	5,707,499	5,932,580	
Wages and Salaries	16,672,964	18,026,364	18,910,491	19,923,873	
Other Labor Income	1,641,012	1,717,736	1,927,340	1,902,059	
Proprietors' Income	2,502,736	2,895,695	3,186,052	3,609,391	
Farm	288,405	395,930	439,612	572,930	
Nonfarm	2,214,331	2,499,765	2,746,440	3,036,461	
Distribution of Earnings by Place of Work:					
Extractive	777,264	871,325	938,243	1,100,710	
Farm	478,409	582,540	630,754	765,145	
Agricultural services	222,640	208,311	209,020	246,529	
Mining	76,215	80,474	98,469	89,036	
Transformative	6,049,618	6,684,159	6,919,610	7,209,458	
Construction	989,541	1,108,316	1,221,186	1,323,340	
Utilities	282,029	313,172	352,082	370,982	
Manufacturing	4,778,048	5,262,671	5,346,342	5,515,136	
Nondurable Goods	1,180,899	1,246,537	1,296,008	1,349,610	
Food Products	462,955	468,043	479,905	489,529	
Textile Mill Products	26,957	28,200	29,570	27,354	
Apparel	35,888	40,493	35,758	37,393	
Paper Products	312,108	335,324	354,653	367,844	
Printing & Publishing	211,307	232,496	251,762	266,013	
Chemicals	57,246	59,167	61,505	61,580	
Petroleum & Coal Prod	16,830	15,573	11,717	16,173	
Rubber & Plastics	50,135	60,283	64,703	77,140	
Leather Products	7,473	6,958	6,435	6,584	
Durable Goods	3,597,149	4,016,134	4,050,334	4,165,526	
Lumber & Wood Prod	1,670,458	1,812,671	1,782,913	1,802,356	
Furniture & Fixtures	42,304	48,715	49,107	53,515	
Primary Metals	254,443	309,132	299,896	303,178	
Fabricated Metals	239,372	265,410	278,425	272,203	
Machinery, exc Elect	416,037	441,012	450,234	458,557	
Electric & Electronic	250,374	335,203	347,764	356,650	
Transp Equip exc M V	107,634	125,673	137,926	195,312	
Motor Vehicles & Equip	111,073	137,305	143,445	140,499	
Stone, Clay, & Glass	79,822	77,794	84,859	93,224	
Instruments	376,796	404,290	417,695	430,141	
Misc Mfg	48,836	58,929	58,070	59,891	

Appendix Table IV-1, Continued
Oregon Personal Income by Industry, 1977-87
In Thousands of Dollars

	1982	1984	1985	1986
Distributive	4,751,024	4,888,446	5,038,824	5,248,504
Transportation	969,754	838,237	843,212	861,598
Communication	439,870	425,401	415,911	422,106
Wholesale Trade	1,472,761	1,600,311	1,702,836	1,783,488
Retail Trade	1,868,639	2,024,497	2,076,865	2,181,312
Personal Services	1,339,551	1,448,986	1,559,222	1,673,987
Restaurants	529,012	533,318	575,227	631,440
Hotels & Other Lodging	125,195	135,880	139,660	149,036
Personal Services	215,411	221,465	266,015	283,187
Private Households	52,087	57,960	58,126	59,715
Auto Repair	221,686	263,599	279,273	294,814
Misc Repair	110,039	131,979	117,158	129,920
Amusement & Recreation	75,410	86,937	102,768	102,907
Motion Pictures	10,711	17,848	20,995	22,968
Producer Services	2,338,656	2,613,698	2,917,586	3,262,627
Finance	578,683	588,538	646,089	719,671
Insurance	417,676	452,322	486,924	544,060
Real Estate	99,208	89,137	75,647	115,985
Business Services	585,163	726,977	863,942	962,023
Legal Services	308,152	361,746	393,507	431,447
Misc Services	349,774	394,978	451,477	489,441
Social Services	1,997,244	2,139,439	2,324,805	2,510,957
Health Services	1,528,635	1,617,958	1,765,808	1,915,873
Educational Services	125,747	148,792	156,835	166,828
Social Services	124,387	140,649	158,352	178,841
Museums, Zoos, etc	5,063	5,113	5,902	6,949
Membership Orgs	213,412	226,927	237,908	242,466
Government	3,563,355	3,741,342	4,070,507	4,161,822
Federal, Civilian	731,158	777,561	811,573	809,322
Military	83,009	84,770	98,006	112,549
State and Local	2,749,188	2,879,011	3,160,928	3,239,951

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table IV-2
U.S. Per Capita Income by State
in Constant 1982 Dollars

	1978	1987	Percent of U.S.	Annual Average Growth Rate 1978-87
U.S.	11,363	12,912	100.0%	1.4%
Alabama	8,899	9,916	76.8%	1.2%
Alaska	16,637	15,056	116.6%	-1.1%
Arizona	10,289	11,810	91.5%	1.5%
Arkansas	8,807	9,548	73.9%	0.9%
California	13,144	14,866	115.1%	1.4%
Colorado	11,756	13,352	103.4%	1.4%
Connecticut	13,311	17,660	136.8%	3.2%
Delaware	11,730	13,668	105.9%	1.7%
Florida	10,920	12,829	99.4%	1.8%
Georgia	9,628	11,867	91.9%	2.3%
Hawaii	12,095	12,934	100.2%	0.7%
Idaho	10,085	9,949	77.1%	-0.2%
Illinois	12,795	13,760	106.6%	0.8%
Indiana	11,038	11,645	90.2%	0.6%
Iowa	11,577	11,945	92.5%	0.3%
Kansas	11,401	12,586	97.5%	1.1%
Kentucky	9,286	10,059	77.9%	0.9%
Louisiana	9,573	9,564	74.1%	-0.0%
Maine	9,268	11,549	89.4%	2.5%
Maryland	12,228	14,918	115.5%	2.2%
Massachuttes	11,813	15,931	123.4%	3.4%
Michigan	12,204	12,904	99.9%	0.6%
Minnesota	11,511	13,285	102.9%	1.6%
Mississippi	8,008	8,589	66.5%	0.8%
Missouri	10,799	12,237	94.8%	1.4%
Montana	10,439	10,316	79.9%	-0.1%
Nebraska	11,113	12,072	93.5%	0.9%
Nevada	13,380	13,433	104.0%	0.0%
New Hampshire	10,814	14,422	111.7%	3.3%
New Jersey	12,919	16,891	130.8%	3.0%
New Mexico	9,397	9,826	76.1%	0.5%
New York	12,201	15,198	117.7%	2.5%
North Carolina	9,264	11,073	85.8%	2.0%
North Dakota	10,746	10,994	85.1%	0.3%
Ohio	11,323	12,242	94.8%	0.9%
Oklahoma	10,225	10,539	81.6%	0.3%
Oregon	11,587	11,689	90.5%	0.1%
Pennsylvania	11,327	12,624	97.8%	1.2%
Rhode Island	10,617	12,925	100.1%	2.2%
South Carolina	8,669	9,981	77.3%	1.6%

Appendix Table IV-2, Continued
U.S. Per Capita Income by State
in Constant 1982 Dollars

	1978	1987	Percent of U.S.	Annual Average Growth Rate 1978-87
South Dakota	9,849	10,531	81.6%	0.7%
Tennessee	9,345	10,722	83.0%	1.5%
Texas	11,006	11,586	89.7%	0.6%
Utah	9,450	9,466	73.3%	0.0%
Vermont	9,784	11,836	91.7%	2.1%
Virginia	10,919	13,739	106.4%	2.6%
Washington	12,311	13,000	100.7%	0.6%
West Virginia	9,094	9,225	71.4%	0.2%
Wisconsin	11,296	12,339	95.6%	1.0%
Wyoming	12,686	10,740	83.2%	-1.8%

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Appendix Table V-1
Top Twenty-five Export Destinations from
Columbia-Snake River Customs District
In Thousands of Dollars

Country	1986	1987	Percent Change 1986-87
Japan	1,571,602	1,721,623	9.5%
South Korea	304,933	378,784	24.2%
Taiwan	247,684	211,226	-14.7%
China	90,180	178,972	98.5%
Egypt	33,606	146,377	335.6%
Saudi Arabia	59,807	146,200	144.5%
Philippines	98,393	91,328	-7.2%
Italy	60,949	87,904	44.2%
Australia	68,293	82,347	20.6%
Hong Kong	68,665	59,972	-12.7%
Indonesia	64,658	44,044	-31.9%
Bangladesh	34,847	30,492	-12.5%
Netherlands	31,685	27,123	-14.4%
Malaysia	18,262	25,877	41.7%
France	11,870	25,823	117.5%
Sri Lanka	7,035	24,998	255.3%
Denmark	20,010	23,150	15.7%
Spain	30,998	22,454	-27.6%
Pakistan	64,658	21,847	-66.2%
Thailand	17,843	21,234	19.0%
United Kingdom	17,332	20,621	19.0%
West Germany	24,334	19,075	-21.6%
Singapore	9,861	18,613	88.8%
Iraq	0	18,224	--
Belgium/Luxembourg	9,730	15,593	60.3%
Greece	9,896	15,462	56.2%
Sweden	7,960	15,282	92.0%
Yemen	12,577	13,594	8.1%
Canada	24,431	12,945	-47.0%
New Zealand	51,064	12,345	-75.8%
So Africa	13,630	10,741	-21.2%
India	5,317	8,175	53.8%
Mexico	0	8,146	--
Peru	6,102	8,074	32.3%
Other Countries	12,482	55,345	343.4%
Total	3,110,694	3,624,010	16.5%

Appendix Table V-2
Top Twenty-five Export Products from Columbia-Snake River Customs District
In Thousands of Dollars

Country	1986	1987	Percent Change 1986-87
Grains	1,422,584	1,540,820	8.3%
Logs & Timber	380,847	485,419	27.5%
Paper Products	285,824	323,817	13.3%
Lumber Products	170,292	249,312	46.4%
Chemicals/Petro	139,197	145,804	4.7%
Wood Chips	113,665	134,805	18.6%
Vegetables	91,380	103,555	13.3%
Metals	71,036	85,984	21.0%
Animal/Veg Oil	3,349	76,225	2176.1%
Gen'l Machinery	43,311	71,040	64.0%
Nonmetallic Minerals	64,802	66,714	3.0%
Plywood & Veneer	48,738	61,495	26.2%
Hides & Skins	47,929	61,065	27.4%
Other Animal/Veg	36,782	39,495	7.4%
Nuts/Sugar/Coffee	21,598	26,867	24.4%
Live Plants	18,057	22,722	25.8%
Fish	19,119	21,936	14.7%
Metal Ores	5,153	18,281	254.8%
Meats	17,670	11,788	-33.3%
Computing Equip	17,261	10,184	-41.0%
Vehicle Parts	12,733	6,847	-46.2%
Special	9,472	6,113	-35.5%
Textiles	2,082	5,503	164.3%
Other Machines	5,886	5,162	-12.3%
Motor Vehicles	1,808	4,481	147.8%
Live Animals	1,008	4,093	306.1%
Electric Machinery	2,561	3,916	52.9%
Electronic Comp	1,674	3,776	125.6%
Other Products	54,876	26,791	-51.2%
Total	3,110,694	3,624,010	16.5%

Appendix Table V-3
Top Twenty-five Import Destinations to Columbia-Snake River Customs District
In Thousands of Dollars

Country	1986	1987	Percent Change 1986-87
Japan	3,335,953	2,969,323	-11.0%
South Korea	365,316	598,479	63.8%
Taiwan	199,907	258,233	29.2%
West Germany	207,739	206,324	-0.7%
Australia	194,543	193,988	-0.3%
Sweden	74,228	69,825	-5.9%
United Kingdom	46,004	57,600	25.2%
Hong Kong	43,820	41,598	-5.1%
France	61,699	41,030	-33.5%
China	29,951	37,767	26.1%
Philippines	30,660	37,555	22.5%
Malaysia	27,222	30,960	13.7%
Italy	26,773	27,234	1.7%
Netherlands	36,975	26,393	-28.6%
Canada	37,504	26,309	-29.9%
Venezuela	31,861	21,520	-32.5%
Thailand	15,396	20,436	32.7%
Indonesia	11,461	17,670	54.2%
Belgium/Luxembourg	7,708	15,520	101.3%
Brazil	4,035	12,114	200.2%
Mexico	15,310	11,985	-21.7%
Singapore	9,341	9,887	5.8%
Switzerland	9,135	9,213	0.9%
Spain	7,673	8,531	11.2%
Austria	3,084	8,197	165.8%
New Zealand	5,477	8,141	48.6%
Neth Antilles	0	7,925	---
Norway	7,328	6,421	-12.4%
Ireland	1,705	5,857	243.5%
Saudi Arabia	218	5,092	2235.8%
Denmark	3,806	5,066	33.1%
Finland	7,802	5,048	-35.3%
Chile	3,954	4,956	25.3%
Argentina	3,540	4,687	32.4%
Other Countries	49,666	40,162	-19.1%
Total	4,916,794	4,851,046	-1.3%

Appendix Table V-4
Top Twenty-five Import Products to Columbia-Snake River Customs District
In Thousands of Dollars

Country	1986	1987	Percent Change 1986-87
Motor Vehicles	3,171,709	2,900,991	-8.5%
Chemicals/Petro	307,190	295,141	-3.9%
Metals	293,682	279,531	-4.8%
Foot & Headwear	137,378	169,475	23.4%
Electric Machinery	66,040	138,791	110.2%
Gen'l Machinery	138,366	114,741	-17.1%
Computing Equip	47,028	106,065	125.5%
Electronic Comp	69,387	97,864	41.0%
Communications	47,424	89,385	88.5%
Rubber/Plastic	97,479	82,339	-15.5%
Vehicle Parts	73,896	61,423	-16.9%
Textiles	60,557	56,783	-6.2%
Measuring/Controls	40,925	52,469	28.2%
Animal/Veg Oil	34,704	41,548	19.7%
Sporting Goods	37,984	40,440	6.5%
Paper Products	31,820	34,107	7.2%
Nuts/Sugar/Coffee	36,075	33,529	-7.1%
Nonmetallic Minerals	34,100	30,983	-9.1%
Special	35,076	29,308	-16.4%
Plywood & Veneer	20,214	27,606	36.6%
Other Machines	26,006	24,387	-6.2%
Musical Instruments	15,396	22,084	43.4%
Miscellaneous	14,831	19,642	32.4%
Live Plants	9,252	19,560	111.4%
Lumber Products	8,715	12,402	42.3%
Fish	7,347	9,215	25.4%
Medical	7,789	9,173	17.8%
Vegetables	6,499	8,665	33.3%
Other Products	39,925	43,399	8.7%
Total	4,916,794	4,851,046	-1.3%

Appendix Table IX-1
Derivation of Gross Farm Product and Net Farm Income
In Thousands of Dollars

	1977	1985	1986	1977-86 Growth Rate
Total Crops	702,991	1,114,624	1,134,585	5.5%
Food Grains	133,427	201,520	143,405	
Feed Grains	52,267	129,537	116,788	
Vegetables	158,306	230,704	248,570	
Fruit & Nuts	100,061	165,333	206,832	
Other Crops	258,930	387,530	418,990	
Total Livestock	355,963	622,449	649,449	6.9%
Meat Animals	188,273	341,802	366,520	
Poultry & Eggs	51,556	62,831	66,203	
Dairy Products	103,641	184,927	183,182	
Other Livestock	12,493	32,889	33,544	
Total Cash Receipts	1,058,954	1,737,073	1,784,034	6.0%
Other Farm Income	20,400	136,200	146,800	
Home Consumption	23,254	28,600	23,100	
Rental Value Farm Dwellings	128,859	225,700	200,300	
Change in Inventories	(3,100)	(6,700)	(59,100)	
Less: Rent to Nonfarm Landlords	22,487	57,200	60,700	
Gross Value of Output	1,205,880	2,063,673	2,034,434	6.0%
Production Expenses	535,757	928,900	837,700	5.1%
Feed	110,983	193,000	168,700	
Livestock	32,800	45,700	37,900	
Seed	32,136	34,400	30,700	
Fertilizer	81,507	90,300	74,600	
Pesticides	22,624	63,800	57,400	
Fuels & Oils	52,114	75,000	54,600	
Electricity	15,671	31,800	31,400	
Short Term Interest	45,759	93,800	83,700	
Repairs	64,176	91,200	93,900	
Miscellaneous	77,987	209,900	204,800	
Gross Farm Product	670,123	1,134,773	1,196,734	6.7%
Constant 82 $'s	826,292	1,193,242	1,326,756	5.4%
Depreciation	163,052	260,500	233,300	
Property Taxes	64,575	60,100	59,100	
Government Payments	23,500	71,400	127,600	
Net Farm Product	465,996	885,573	1,031,934	9.2%
Hired Labor	170,616	199,100	200,700	
Interest on Mortgage	85,156	192,700	178,100	
Net Farm Income	210,224	493,773	653,134	13.4%

Source: Oregon Economic Development Department from U.S. Department of Agriculture data.

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